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AUG 25 1930
DETROIT

A National Newspaper for Every Branch of the Industry

Automotive Daily News

CARS · SHOP EQUIPMENT · TRUCKS · AVIATION · PARTS · ACCESSORIES · TIRES

Vol. 10. No. 1279 | Entered as second-class matter Aug. 27, 1925, Post Office, N. Y., N. Y., Under Act of March 3, 1879. | NEW YORK, FRIDAY, AUGUST 22, 1930 | 10 Cents. $12 Per Year

IMPROVED WHIPPET 4 ANNOUNCED

Car, Truck Manufacturers Maintain Working Capital At Levels of Last Year

Ten Companies Show 6.9 Per Cent. Gain in Aggregate Net as of June 30, as Compared With December 31, 1929

NEW YORK, Aug. 21.—Passenger car and truck manufacturers during the first half of the current year, despite curtailment in production and sales, maintained working practically at the same level that prevailed at the close of 1929 and in some cases increased it, according to the available statistics.

In fact, the aggregate working capital of ten leading manufacturers as of June 30, 1930, amounted to **$510,024,635**, as compared with **$477,338,480** as of December 31, 1929, a gain of $32,686,155, equivalent to 6.9 per cent.

Three of the ten companies, General Motors, Chrysler and Pierce-Arrow increased their working capital, while only slight declines were shown by the other seven concerns.

While General Motors was responsible for the net gain for the ten corporations, the decline in the net working capital of the other nine companies for the six months period amounted to only 2.3 per cent. The total for the companies, excluding General Motors, was $219,447,234, as compared with $226,050,698 as of December 31, 1929, a loss of $6,603,297.

The net working capital of General Motors as of June 30 was $290,577,234, as compared with $251,287,782 as of the close of 1929, a gain of approximately $39,000,000.

Chrysler's working capital increased from $71,385,177 as of December 31, 1929, to $73,567,892 on

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NATIONAL BUS GROUP SEEKS STABILIZATION OF LOCAL BUS RATES

Washington, Aug. 21.—The National Association of Motor Bus Operators will hold its annual convention in Chicago September 25 and 26, Arthur M. Hill of Charleston, W. Va., president of the organization, announced here today.

With approximately 2,000,000,000 passengers now carried annually by motor buses in common carrier service, improvement in interline relations and stabilization of local rates will be the objective of the convention, he said.

Mr. Hill asserted that the program, in order to more closely coordinate bus transportation, will be launched in the form of a report from a special traffic committee on the "Co-ordination and Co-operation in the Handling of Interline Traffic."

He pointed out that with Federal regulation of interstate lines one of the great needs in the field of bus transportation and favorable action by Congress at the next session anticipated, legislation will be featured

(Continued on Page 2)

AMERICAN AUSTIN CAR ORDERS NOW $81,930,000, THREE YEARS' OUTPUT

New York, Aug. 21.—The American Austin Car Company as of June 30 last had on hand unfilled orders for 184,117 vehicles, the retail value of which would approximate $81,930,000, according to Samuel Vallance, vice-president.

The company's chief problem has been one of production rather than distribution. Normal capacity is figured at 60,000 vehicles per year, and the orders on hand June 30 were equal to more than three years' production. The management is taking steps to speed output so that deliveries can be made in reasonable time.

Commercial users of the Austin in New York city now include Bloomingdale, Cushman, Borden, Anheuser-Busch, Vortex Laundries and Loose-Wiles Biscuit, as well as a score of lesser known concerns.

NASH WILL RESUME OPERATIONS SEPT. 1

Chicago, Aug. 21.—Nash Motors Company will resume production at Kenosha around September 1 with a force of 500 to 600 men, which will be added to gradually until full production is attained.

MOTOR CAR VALUE NOW GREATEST IN HISTORY

Auburn, Ind., Aug. 21.—The automobile dollar today buys the greatest value in the history of the industry, Roy H. Faulkner, vice-president of Auburn, points out.

"Figures compiled by the National Automobile Chamber of Commerce estimate that the automobile dollar value for the industry is now approximately $1.20 as compared with the cost of the living dollar at 64 cents in terms of 1914 purchasing power. Auburn's value as compared with 1914 is well over $2," he says.

Of equal importance to this, says the Auburn official, is that the automobile of 1930 is infinitely superior to that of previous years.

"For instance, in 1905, a two-cylinder Auburn automobile developing about 18 horsepower and with a speed of approximately 20 miles an hour, sold for $1,250. The car had no top, no fore-doors and was without self-starter, electric lights, bumpers, shock absorbers, or any of the conveniences and advancements of the present-day automobile.

"Consider as a comparison with

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INCLOSED BRAKES, RUBBER ENGINE MOUNTING, TWO-WAY SHOCK ABSORBERS FEATURED

Line Includes Three Body Types, Offering New Comfort and Improved Exterior Appearance

TOLEDO, O., Aug. 21.—The new improved Whippet Four will make its public appearance Saturday. The new line comprises a two-passenger coupe, four-door five-passenger sedan and commercial chassis. The coupe is available with a rumble seat.

Although the body lines in reality are unchanged, the improved car has a distinctly different appearance. This has been accomplished by the adoption of entirely new exterior color schemes, with the outside of the roof matching the body paint. The appearance is aided also by the new arrangement of the hood louvers. New coach type upholstering adds a touch of beauty and comfort in the interiors.

The price range is the same as last year. The four-door sedan continues as the lowest priced car of this kind on the American market.

The manufacturers have retained the fundamentals which identified the Whippet during 1930. It has a four-cylinder engine, a transmission of conventional design, with three forward speeds. Fingertip control of the horn, starting and lighting is continued, with all controls centered in a single button at the top of the steering post.

A greater degree of smoothness is obtained by mounting the engine so that all points of its contact with the frame are rubber insulated.

The new advances also include fully inclosed internal four-wheel brakes, four two-way hydraulic shock eliminators, an adjustable front seat in the sedan, newly designed head lamps, hub caps and radiator cap and a Klaxon horn mounted on the front tie-bar.

Bendix duo-servo, two shoe, internal expanding brakes which are fully inclosed, are employed. They operate by cable and conduit instead of by the usual ball-crank and lever. This construction is claimed to eliminate brake rattle in addition to providing better braking ability.

The improved models are mounted on the same wheel base chassis as was used during the current year, 103½ inch. The bore and stroke of

(Continued on Page 11)

WILLYS-OVERLAND ANNOUNCES PRICES ON NEW WHIPPET 4

Toledo, O., Aug. 21.—Prices on the Improved Whippet models which will be publicly presented Saturday are announced by the Willys-Overland Company as follows:—

5-Pas. 4-Dr. Sedan	$585
2-Passenger Coupe	525
Coupe with Rumble Seat	555

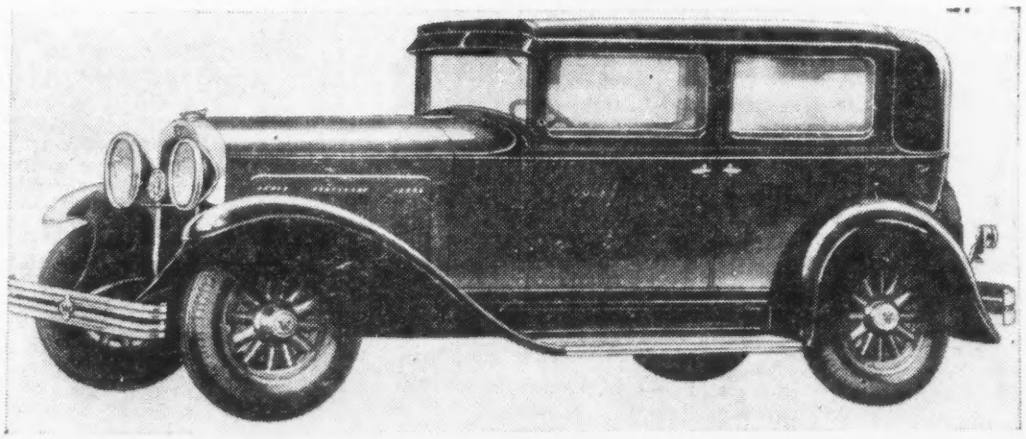
OPEL WORKS INCREASES ITS PRODUCTION RATE

Berlin, Aug. 21.—The Opel Works of Ruesselsheim, a subsidiary of the General Motors Corporation, announces that it has increased its production rate in August and September as a result of a favorable inflow of orders.

The production of commercial vehicles has been expanded by 40 per cent., while passenger car output has been stepped up 20 per cent., according to the company's statement.

Notices of discharge to employees, which had been contemplated during the summer, have been withdrawn.

New Whippet Four Sedan at $585



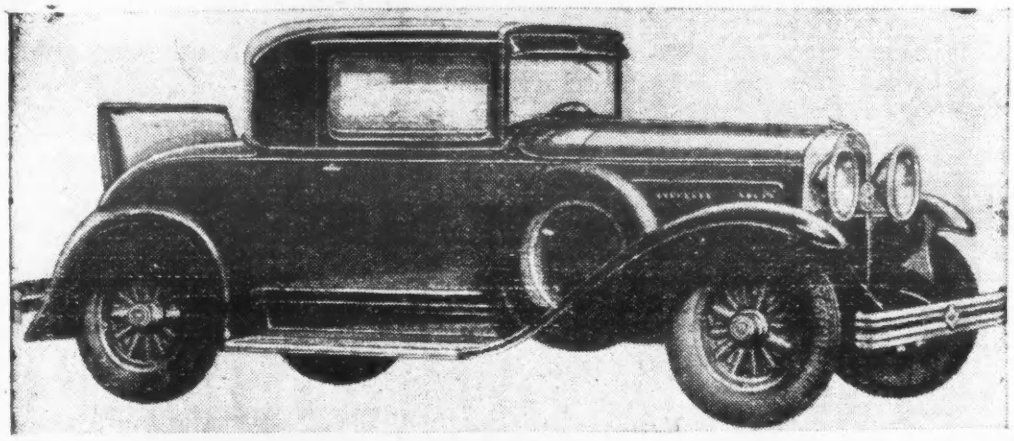
THE IMPROVED WHIPPET SEDAN for five listed at $585 retains its position as the lowest-priced four-door sedan in the world. New couch-type upholstery add a new touch, while the new exterior color combinations give it an entirely different appearance from its predecessor. The use of hydraulic shock eliminators, both front and rear, adds to the car's riding comfort.

RUBBER INVOICED TO U. S. SHOWS GAIN FOR WEEK

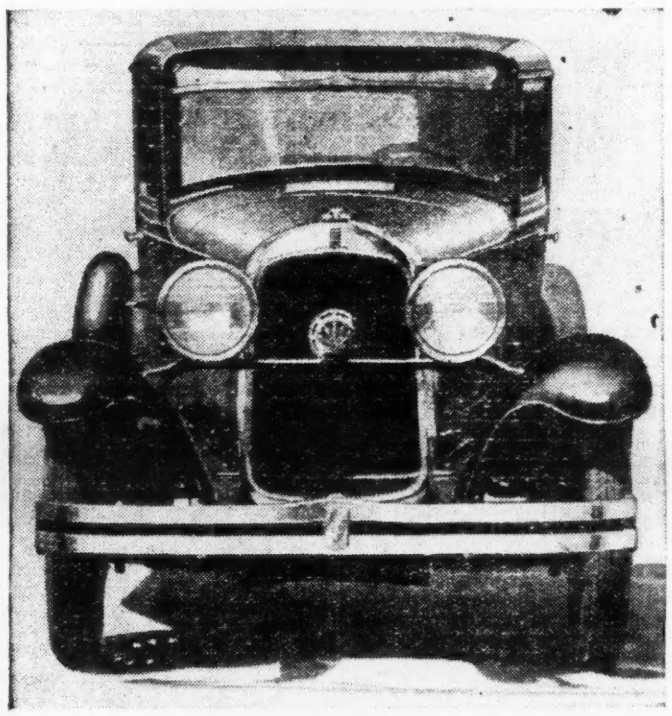
Washington, Aug. 21.—Rubber invoiced to the United States during the week ended August 16 totaled 8,832 long tons, compared with 8,250 tons the previous week, according to figures compiled today by the rubber division of the Department of Commerce.

Cabled reports to the division from American consular offices at the principal shipping points show invoices visaed during the week for 6,177 tons from British Malaya, against 5,397 tons the previous week; 820 tons from Ceylon, against 914 tons; 1,810 tons from Netherland East Indies, against 1,939 tons, and 25 tons from London and Liverpool.

Whippet Four, 4-Passenger Coupe



THE FOUR-PASSENGER COUPE in the improved Whippet line accommodates two passengers in the front seat and two in the rumble seat in the rear. When the rear seat is not occupied it may be used as a luggage compartment. **Price $555**



STREAMLINE EFFECT is enhanced in the front design of the Improved Whippet. The Klaxon horn is mounted on the tie-bar between the head lights

Car, Truck Makers Keep Working Capital Intact

(Continued from Page 1)

June 30. Pierce-Arrow's working capital on June 30 amounted to $5,250,823, as compared with $4,157,540 six months earlier.

No serious decline occurred in the net working capital of any of the ten companies for which statistics are available.

Following is the net working capital as of June 30, 1930, of those companies for which the information is available, as compared with December 31, 1929:

	June 30, 1930	Dec. 31, 1929
Chrysler	$73,567,892	$71,385,177
Gen. Motors.	290,577,234	251,287,782
Grah'm-P'ge	10,703,456	11,569,958
Hupp	15,127,974	17,341,896
Packard	24,246,750	24,875,817
Pierce-Ar. ..	5,250,529	4,157,540
Reo	18,850,823	19,971,778
Studebaker .	24,229,923	26,039,792
White	28,413,385	29,020,941
Willys-Over..	19,056,669	21,687,799
Totals	$510,024,635	$477,338,480

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MOTORCYCLES FOR SALE

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MOTOR CAR VALUE NOW GREATEST IN HISTORY

(Continued from Page 1)

that, the present-day Auburn straight-eight of 100 horsepower, four-wheel hydraulic brakes, hydraulic shock absorbers, cam and lever steering, rich upholstery, closed low bodies, with scores of other outstanding improvements and which now sells for $1,195.

"In 1914, touring cars in the price class of Auburn sold for around $2,200, many higher. Yet these early models were open cars and had few if any of the advancements of the present-day car. As compared with its own price of $2,100 in 1914 for its 6-46 model, a six cylinder open car, Auburn's dollar value shows better than $2 today.

"The automobile industry, as a whole, has steadily increased the values given the public," Faulkner said, "until today it is doubtful if there is any other industry which offers so much. This has been made possible, first, by the pioneers who have constantly sought to bring something new, advanced and fundamental to the industry and secondly, by the acceptance of the automobile to such a point where production has put prices within the reach of an ever-increasing public."

NATIONAL BUS GROUP SEEKS STABILIZATION OF LOCAL BUS RATES

(Continued from Page 1)

on the convention agenda. Senator Otis F. Glenn of Illinois has tentatively accepted an invitation to make an address.

Charles M. Hayes, president of the Chicago Motor Club and chairman of the A. A. A. national committee on highway widening and planning, will discuss the motor bus from the viewpoint of the private car owner.

"The aim of those engaged in bus transportation," Mr. Hill said, "is to weave the more important lines into a network of efficient systems through connecting schedules, interline tickets, and other adjustments in line with public interest.

"There has been no means of transportation yet developed which so closely fits into existing systems. This is evidenced by the use of the bus by rail carriers in conjunction with air lines and for mass transit where it is impracticable to build street railways.

"Years of experiment which have gone into the development of bus transportation have produced definite results. The industry is now prepared to take full advantage of this period of pioneering to promote orderly development in the future."

NEW BRITISH MOTOR MODELS ARE ANNOUNCED; PLANTS BEING EXTENDED

London, Aug. 21.—Formation of a company known as Triumph Commercial Cars, Ltd., presages the appearance in England of a 7-horse power Triumph adapted for light delivery work, and it is understood that experiments in this direction have been proceeding for some time, the automotive division, Department of Commerce, is advised by Trade Commissioner F. E. Sullivan, London. Also, the A. J. S. (A. J. Stevens) Co. 9-horse power car is ready for production after months of experimental work. A number of other new British models were announced in June and others were known to be in the experimental stage. The latter, it is believed, will be for the most part 6-cylinder cars and smaller 4-cylinder models.

Few plant extensions have been made in England since the beginning of this year as several factories extended their facilities during 1929. However, the Hillman-Humber combine is being transformed from two units into one working whole; a new and much larger machine shop for the manufacture of 8-cylinder Hillman engines is nearing completion and additional buildings are being extended. Similar changes are taking place in the Humber section.

The Austin Company is said to be planning to modernize further its plant and equipment so as to bring about increased production and lower costs, with a view to placing at least the smaller models on the market at a considerably reduced price.

SPARKS from DETROIT

Canada "Het Up"

* * *

Milk as Fire Extinguisher

* * *

Best Paid Workers

* * *

THE city of Windsor, Canada, just across the river from Detroit, is all "het up" regarding automobiles and automobile manufacturers and manufacturing, and, because of unemployment in certain quarters, wants something done about the question of importing motor cars made in the United States to the Dominion.

At a meeting of mayors of the border cities a few days ago these officials proposed a ban on importation of completed vehicles to Canada as a means of combating unemployment. The recommendation is to be carried to the Dominion government at Ottawa in the form of a resolution from the mayors by Raymond D. Moran, member of Parliament for East Essex, who presided at the meeting.

It was pointed out that many automobiles are shipped into Canada principally from the United States, half finished, and are completed in Canadian factories with Canadian parts and labor. Other motor cars are brought in ready for operation, necessitating no expenditures for labor. Automobiles valued at $40,000,000 are thus brought in annually, it is estimated.

If the action asked is carried out, it was said, automobile plants in Windsor, such as Henry Ford's, would be able to keep up full time schedules and thereby prevent lay-offs that in the past few years have brought about industrial depression in Windsor.

An estimate by the mayors placed the number of men out of work in the border cities at about 4,500.

As yet no great concern over the proposal has been displayed by Detroit automobile manufacturers.

* * *

NEW methods of fighting fire are constantly being discovered, but never before in the history of Detroit has milk been called upon to replace water in quenching a blaze.

It all happened the other morning when Tony Zellner, a taxicab driver, was seriously injured when his taxicab collided with a traffic signal. The automobile ran over the curb and caught fire.

A passing milkman and a couple of other men pulled the injured man from the taxicab and then the milkman went into action by gathering bottles of milk from his wagon and smashing them over the taxicab, thus putting out the fire.

* * *

THE residents of Flint, where are located the enormous plants of Chevrolet, Buick, A. C. Spark Plug and Fisher Body, are saying: "I told you so!"

This is because the workers of Flint are the best paid of any city in the United States having a population of 100,000 or more. You can take the word of Dorrence, Sullivan & Co., Chicago advertising agents, who have just completed a study of wage conditions throughout the United States, for this.

It is reported the average wage paid industrial workers in the United States is $1,300 a year. The average in Flint is $1,770. The average for Detroit is $1,680; Cleveland, $1,530, and New York, $1,635.

* * *

STINSON Aircraft Corporation of Wayne built and sold 22.3 per cent. of all the commercial airplanes manufactured in the United States in the second quarter of 1930, figures released by the Aeronautical Chamber of Commerce show. The period covers April, May and June.

Total number of commercial planes produced in this country during the period was 597, with Stinson's production reaching 133. The remaining planes were divided among 57 other manufacturers.

In this same period 201 closed cockpit planes were sold by all manufacturers, Stinson building and selling 133 of this number, or 53.6 per cent. In the same period 248 monoplanes were produced, including multi-engined transports, closed cabin monoplanes and open cockpit planes. Stinson sales were 53.7 per cent of this total.

Total airplanes of all types, including commercial and military, built in this country in the first six months of 1930, according to the Aeronautical Chamber, was 1,098, of which Stinson built 149 or 13.6 per cent.

NEW YORK CAR MERCHANTS HOLD GOLF TOURNAMENT

New York, Aug. 21.—The fifth monthly golf tournament of the Automobile Merchants' Association of New York, Inc., was held on Tuesday, August 19, at the Westchester Country Club, Rye, N. Y. Edward Farrell of the Standard Oil Company of Mount Vernon won the low net prize. Following a dinner in the evening, the prizes were distributed by Fred J. Ryan, vice-chairman of the golf committee, and C. H. Jennings. The semi-final tournament will be held on September 16 at the Westchester Hills Golf Club, White Plains, N. Y.

CLASSIFIED ADVERTISEMENTS IN THE AUTOMOTIVE DAILY NEWS BRING RESULTS

FORD'S GAIN 451 IN NEW HAMPSHIRE

NEW YORK, Aug. 21.—New car sales in New Hampshire in July were 15.9 per cent. under June of this year and 28 per cent. lower than in July, 1929. In the first seven months, with a total registration of 7,849, sales were 14.9 per cent. behind the same period a year ago.

Ford held its own as compared with July, 1929, but was 100 units under June this year. In the first seven months, Ford had a gain of 451 units. Chevrolet, which showed a loss of 84 units in July, was 49 units behind June and only 29 units behind the first seven months of last year.

Auburn beat its July, 1929, record and was tied with its June sales. Buick was ahead of June as were Cadillac, Durant, Hudson, Nash, Oakland, Oldsmobile, Studebaker, Willys and Willys-Knight.

Graham tied its June mark, while Lincoln tied both July, 1929, and June, 1930. Packard tied July, as did also Peerless and Studebaker.

In the first five months, in addition to Ford, gains were recorded by Auburn, Cadillac, Marquette, Pierce-Arrow and Reo. Peerless tied its 1929 record, while Chrysler, with a total of 212, was only six units behind its 1929 mark.

The registration for July, compared with the same month last year and June of this year, follows:

	July 1930	July 1929	June 1930
Auburn	10	6	10
Buick	38	49	35
Cadillac	4	...	3
Chevrolet	221	305	270
Chrysler	28	46	38
De Soto	14	33	19
Dodge	21	47	30
Durant	11	39	8
Essex	29	80	46
Ford	473	472	573
Franklin	...	14	2
Graham	17	22	17
Hudson	16	25	13
Hupmobile	7	17	18
Jordon	1	2	2
La Salle	3	7	3
Lincoln	1	1	1
Marmon-Roosevelt	7	18	11
Marquette	2	15	7
Nash	45	59	44
Oakland	9	13	7
Oldsmobile	27	43	25
Packard	11	11	16
Peerless	2	2	...
Pierce-Arrow	1	...	3
Plymouth	27	46	52
Pontiac	29	63	30
Reo	10	11	13
Studebaker	36	36	20
Viking	1	2	1
Whippet	3	60	6
Willys	20	*	16
Willys-Knight	8	15	6
Misc.		7	...
Totals	1131	1571	1345

The registrations in the first seven months, as compared with the same period last year, follow:

	1930	1929
Auburn	48	34
Blackhawk	1	*
Buick	303	335
Caddillac	30	20
Chevrolet	1,770	1,799
Chrysler	212	218
Cord	2	*
De Soto	150	211
Dodge	156	242
Durant	78	186
Essex	280	656
Ford	2,994	2,543
Franklin	25	61
Graham	94	139
Hudson	80	93
Hupmobile	25	31
Jordan	4	14
La Salle	20	40
Lincoln	6	8
Marmon-Roosevelt	34	98
Marquette	34	31
Nash	243	428
Oakland	69	84
Oldsmobile	169	236
Packard	61	91
Peerless	11	11
Pierce-Arrow	17	10
Plymouth	187	235
Pontiac	212	401
Reo	85	57
Studebaker	166	215
Viking	4	8
Whippet	46	431
Willys	122	*
Willys-Knight	46	89
Misc.	—	43
Totals	7,849	9,232

* Not on market at that time.

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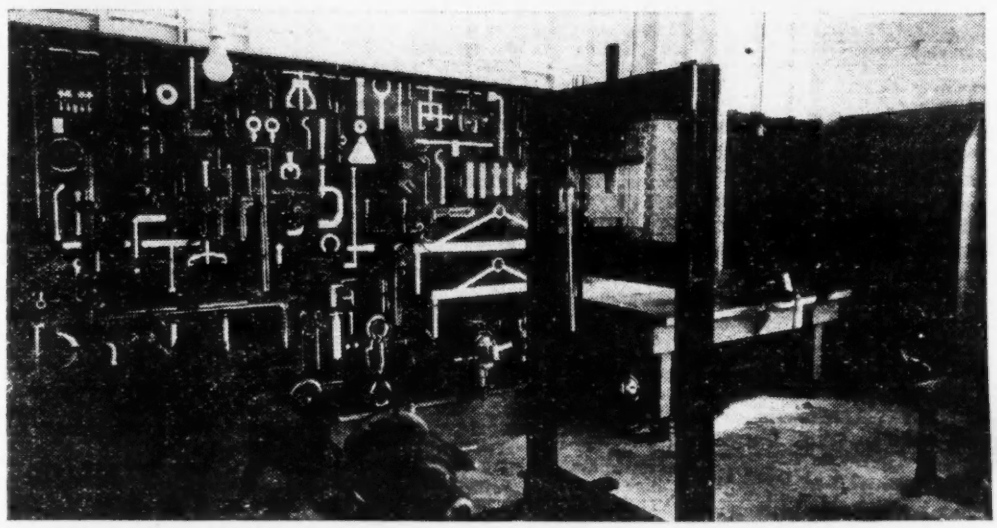


ABOVE ARE SHOWN the accessory counter at the rear of the showroom, and the tool board in the service station of the Carrington Chevrolet Company of Montrose, Col. While located in a town of 3,500 population, the concern ranks third in the state, with cities of 60,000 and 40,000 leading

Ford of England Shares Chiefly Held in America

New York, Aug. 21.—The fame of the Ford name is indicated again by the exceptional market enjoyed by Ford Motor Company, Ltd. (England), popularly known as Ford of England in this country. Originally issued for the purpose of dividing ownership and creating good-will among its potential markets in Great Britain, an overwhelming majority of the shares have found their way to the American market, and furnish an active medium of trading in several American financial centers.

The original issue of Ford of England made in 1928 was 7,000,000 shares of £1 par value. Of this total, the Ford family owns 4,200,000 shares and 2,800,000 shares were offered for public subscription at par value or approximately $5 a share. Shortly after the offering the stock advanced rapidly to around five times its par value, from which level it later receded with the stock market unsettlement in this country last year. It recently has been making up some of the lost ground toward the highest point of its original spurt. About 90 per cent. of the stock in the hands of the public, it is understood, is now represented by American certificates and the number of stockholders is estimated at approximately 60,000 with average ownership of forty-two shares each.

There is an absence of any comprehensive official information concerning the company and its operations beyond that contained in the original prospectus and in various reports issued by the company and its subsidiaries for the past year. The official statement of the parent company for the year ended December 31, 1929, showed net income, after taxes, of 818.506 pounds, after a reserve of 811,736 pounds, to write of patents, good will and preliminary organization expenses.

As in the case of the American Ford Company statements, there have been sufficient reserve charges and other items in connection with the statements to indicate that the showing is not fairly representative of the actual earning power, but, rather, represents a conservative valuation.

Ford of England owns a 60 per cent. interest, or its equivalent, in various companies in continental Europe, which include Ford of France, Belgium, Germany, Copenhagen, Holland, Finland, Sweden, Spain, Turkey and Italy. In general, the 40 per cent. minority interest was offered for public subscription to the residents of the countries forming a potential automobile consuming market. Ford of England also owns the tractor manufacturing plant at Cork, Ireland, which builds all Ford tractors and has capacity of 30,000 to 40,000 units a year.

While the present Manchester plants have a capacity of around 40,000 automobiles a year, the company has under construction an industrial site at Dagenham with capacity to produce 200,000 units a year. The output of the various companies in the Ford chain last year is variously estimated at from 125,000 units to upward of 150,000 units.

Thus Ford of England forms one of the three major divisions into which the Ford world business has been proportioned. Ford of America, privately owned by the Ford family, markets its products in the United States, Latin America, Japan and China. Ford Motor Company of Canada, Ltd., takes care of Canada and the British Empire, exclusive of the British Isles. The minority interest in this company is publicly owned. Ford of England supplies continental Europe and certain portions of the Near East and Africa.

OTHER FINANCIAL NEWS

RAYBESTOS-MANHATTAN

Raybestos-Manhattan, Inc., reports for six months ended June 30, 1930, consolidated net income of $825,499 after charges, depreciation and Federal taxes, equivalent to $1.22 a share on 675,007 no par shares of common stock. This compares with $2,098.530 or $3.10 a share in first half of 1929.

Consolidated net income for the quarter ended June 30 amounted to $374,524 after above charges, equal to 55 cents a share, comparing with $450,975 or 67 cents a share in preceding quarter.

Current assets of Raybestos-Manhattan, Inc., as of June 30, 1930, was $9,955,082, current liabilities $1,056,415, a ratio of more than 9 to 1. Cash funds, including readily marketable securities were $3,215,177 and were more than three times the current liabilities. Total assets were $19,490,922, and there were no bank loans or funded debt. The surplus of the company at June 30, last, was $8,099,873.

Each operating division of the company showed a net profit.

KELLY SPRINGFIELD TIRE

The Kelly Springfield Tire Company reports for the six months ended June 30, 1930, net loss of $587,610 after charges, depreciation and interest, but before writing down of inventories to market as of June 30.

Current assets as of June 30, last, including $1,100,000 cash, amounted to approximately $13,460,000, and current liabilities $2,315,000. Inventories of raw material were written down to cost or market, whichever was lower on June 30, and for this purpose approximately $101,000 was charged against the inventory reserve set up on December 31, 1929.

HUDSON MOTOR

The Hudson Motor Car Company declared a dividend of 75 cents, payable October 1 to stock of record September 11. Previously the company had been paying $1.25 quarterly.

AUTOCAR

The board of directors of the Autocar Company, motor truck manufacturers of Ardmore, Pa., on August 19 declared a quarterly dividend at the rate of 8 per cent, per annum on the preferred stock of this company issued and outstanding, payable September 15, to stockholders of record as at the close of business September 5.

BIG TIME SHOP IN SMALL CITY

THE Carrington Chevrolet Company of Montrose, Colo., having completed its new $25,000 building, is now one of the best equipped establishments of its kind in the state. Its equipment is 98½ per cent. perfect, ranking as the third best in the western half of the state, outranked only by the shops in Pueblo and Colorado Springs, cities of 60,000 and 40,000 population respectively. Montrose has a population of 3,500. New equipment to the value of more than $3,000 was installed in the new building in addition to about $4,000 worth moved from the old location.

The building, at 612 Main St., is of red and white pressed brick. Its two wings form a huge "L," one fronting on Main Street and holding the showroom, parts department and offices, the other fronting on the avenue at right angles to Main Street and housing the shop. The structure is 50 by 125 feet, and 50 by 100 feet in the shop wing.

The first thing one sees on entering the city from the east is the big $800 electric sign at the front of the building, in four colors and alternating lights. This sign is a part of Chevrolet's standard equipment for large city shops.

The showroom, 24 by 50 feet, is floored with red concrete and lighted with powerful 600 watt lamps, in addition to colored spotlights for evening display. At the back of the showroom, on one side are the general offices, 14 by 29 feet, and Carrington's private office, 9 by 12. On the other side, separated from the show room by new steel frame display cases, is a large parts department, its floor space measuring 18 by 50, with a balcony besides. The parts are catalogued in the newest type of steel files. Between the parts department and offices runs a wide passageway from the showroom to the shop. All floors except those in the offices are of concrete.

There are three entrances to the back shop through which a car may be driven.

The shop boasts the only automobile elevator equipped with a hydraulic greasing system in western Colorado. With the elevator is the wash rack, and next to it the Duco room, with the overhauling and tool room, 20 by 20, in the outside corner. Here is the keynote of modernity, as it contains every tool and piece of equipment necessary to the advanced service garage. A burnishing-in machine, electric brake riveter, all kinds of bearing cutters, presses and lathes are some of the individual pieces. The smaller tools are held on a big tool board, the outline of every tool painted on the board in the position in which it should be hung.

In the main room of the work-shop every mechanic has his own bench and locker arranged in front of the windows. Parallel to the benches is an overhead track the length of the shop, with block and tackle, by which a motor can be run along from one bench to the other in the process of overhauling. At the end of the long line of benches is the body-repairing department, to itself, for the repairing of wrecked bodies.

FORD PLANT RESUMES OPERATIONS IN MEMPHIS

Memphis, Tenn., Aug. 21.—The Ford Motor Company here, has resumed operations with 1,200 men at work. C. C. Ostrander, manager, said that the demand for cars justified more active efforts. About 150 cars per day will be turned out.

NAMED SALES MANAGER

Los Angeles, Aug. 21.—Curt B. Waller has been appointed sales manager for W. L. Hopperstead, Inc., Chevrolet dealer, Sunset Boulevard.

Autocar Trucks

THE AUTOCAR COMPANY, Ardmore, Pa.

August 20, 1930.

The Board of Directors, on August 19th, declared a quarterly dividend at the rate of Eight Per Cent. (8%) per annum on the Preferred Stock of this Company issued and outstanding, payable September 15, 1930, to stockholders of record as at the close of business September 5, 1930. Checks will be mailed.

JOHN C. TANEY, Treasurer.

Automotive Daily News

"Of, By and For the Entire Automotive Industry"

Published Every Day Except Sunday and Monday by
AUTOMOTIVE DAILY NEWS PUBLISHING CORPORATION,
350 Hudson St., New York, N. Y.
O. J. Elder, President. H. A. Tarantous, Vice-President. Alexander Johnston, Secretary.

Entered as second-class matter August 27, 1925, at the post office at New York, N. Y., under the Act of March 3, 1879.

Circulation—Net paid Average over 10,000 daily guaranteed.
Member A. B. C.

FRIDAY, AUGUST 22, 1930

ADVERTISING AND BUSINESS HEADQUARTERS
2716 Graybar Bldg., New York, N. Y. Telephone LEXington 6388
Harry A. Tarantous, Business Manager. J. Edward Schipper, Eastern Manager.
George M. Slocum, Manager Detroit Bureau, 427-8 Fisher Building, Detroit, Mich., phone Empire 3500: Willard R. Cotton, Western Manager, 333 North Michigan Ave., Chicago, Ill., phone Central 5936; Metz B. Hayes, New England Manager, Little Building, Boston, Mass.; Blanchard, Nichols & Coleman, American National Bank Building, San Francisco, Cal.; Lincoln Building, Los Angeles, Cal.; 1037 Henry Building, Seattle, Wash. Address ALL advertising and business correspondence to 2716 Graybar Building, New York City.

EDITORIAL DEPARTMENT
350 Hudson St., New York, N. Y. Telephone CAN al 1000
Alexander Johnston, Editor. William C. Callahan, News Editor.
Detroit Bureau—Fred Kingsbury, Editor, 427-8 Fisher Building, Detroit, Mich., phone Empire 3500. Contributing Editor, John C. Wetmore. A. Benson Carleton, Technical Editor.

Mail subscriptions to **CIRCULATION DEPARTMENT**—C. H. Wilson, Manager.
1926 Broadway, New York, N. Y. Telephone TRAfalgar 4500
Subscription Rates—One year, $12.00; two years, $20.00, for United States and Canada.
To Foreign Countries—One year, $15.00; two years, $26.00. Single copies, 10 cents.

Who Knows?

UPON a very recent occasion, Andrew Mellon, secretary of the Treasury, was quoted as saying that the present depression was fundamentally caused by overproduction by the industries of the world and that when the excess supplies of products had been absorbed and the retail business began making fresh demands on manufacturers, the slump would pass. Mr. Mellon later denied that he had made any comment whatever on business or that he intended to do so.

So that, in a manner of speaking, is that. Nevertheless, what Mr. Mellon was erroneously reported to have said is true talk. Not only the automotive industry, but American industry in general and even world industry, produced more goods in 1929 than the visible markets warranted. The result has been a world-wide stomach ache of truly gargantuan proportions.

We doubt that any one knows, to a fraction of a month, when the excess world supply of most products will have been worked off and the well-known human family again begin demanding manufacturing activity. We do not know, in our own industry, that stocks of motor vehicles in dealers' hands have sunk to the lowest point reached in many years. This indicates that demand is somewhere due to begin. In some other industries the same general condition exists. Business revival may become evident in its incipient stages this fall. It may wait until the first of the year or even until the normal period of spring business increase. Our very best economists have been fooled several times as to the exact date of the revival. They may be again, but their predictions of uplift are going to be justified before many months have passed.

Venerables

OVER in England, at Brooklands track, the other day they held a concourse of ancient cars, which ended in a race for these relics of the stone age of motoring. The race was won, incidentally, by a car built in 1899, known as a Progress Voiturette. The newspapers described the event as "one of the funniest ever staged at Brooklands."

To us the real feature of the veterans race was anything but funny. A De Dietrich car built in 1903, twenty-seven years ago, lashed itself into a fury of speed and made a single circuit of the track at a speed of fifty-eight miles per hour. The Progress Voiturette, mentioned above, won the race at a speed of 25.48 miles per hour. Our reaction to this contest among cars builty twenty-five years or more ago is an added respect for the honest labor, the carefully selected materials, the skillful craftmanship of the pioneer automotive manufacturers who conceived and executed these early highway vehicles. How many of the cars of 1930 will be able to run in 1960? How many of them will be able to go out on any track and turn in a circuit at eighty miles per hour, a speed comparable to the fifty-eight miles per hour of the old De Dietrich? The designers and manufacturers of the automotive dawn era lacked some of our finesse; they lacked much of our knowledge of metallurgy and all of our understanding of mass production, but they knew how to turn out an honest job when they were lucky enough to chase down a buyer. Not that we deny those same qualities to present-day manufacturers and engineers; our tribute is simply to the men who did a good job without the same facilities and materials that we moderns are able to employ.

Roy Faulkner of Auburn calls attention to a condition that has not been given as much emphasis as it deserves. At the present moment the automotive dollar has reached the highest buying power point in history. Official figures place it at $1.20 of the dollar of 1914. This compares with a cost of living dollar which has a purchasing power of only 64 cents of that measuring stick dollar of 1914. And even that doesn't tell the story, for the product that the 1930 dollar buys is as superior to the 1914 variety as pre-war is to bathtub gin.

Ask Us to Tell You—

IN THIS service department, The Automotive Daily News is actuated by the desire to help readers solve their problems, whether these are merchandising, technical or in the field of general automotive information. We shall be glad to have our readers ask us any questions pertaining to the automotive field.

In some instances readers may desire information which will require an expenditure of money to secure, and in such cases we shall be glad to get the desired data at the least posible cost, or shall inform our readers where they may obtain it most economically and expeditiously.

In cases where the reader desires an immediate reply, we would suggest he inclose a self-addressed and stamped envelope.

Offers Relief Plan for Used Car Market

MANUFACTURERS of automobiles who have produced one or two models a year for the past several years unquestionably operated on this basis to stimulate buying, particularly buying by motorists owning cars of their manufactture which were but one or two years old.

This worked to their advantage so long as dealers could absorb new cars and trade-ins of late models. The disadvantage to the dealer was in building up his used car stock with too many cars near his new car price and of the same make as his new cars. When he concentrated to move these cars, new car sales fell off, and shipments from the factory piled up in the warehouse. Renewed effort on new car sales brought him back to the same starting point.

The salvation of many new car dealers was the used car dealer who had built up a business by keen merchandising and consistent advertising, specializing in late series used cars. When the new car dealer became overstocked with used cars or was pressed for money, he had an immediate cash outlet in the used car dealer. Many dealers found it better business, when trading for a late series automobile, never to stock the trade-in, but turn it immediately to a used car dealer.

That the dealer in late series used cars has done much to uphold the value of this merchandise is evident, thus enabling the new car dealer to make many trades which otherwise he would miss.

With overproduction or left-over new cars, when models were changing, there had to be some method of disposing of these cars. New car dealers with this stock could not seem to market it without interfering with their new car sales. This slowed up delivery of the new models.

The same used car dealer handling one or two old used cars was the logical merchandiser of these cars, and, to keep the new models rolling, factories, distributors and dealers sold these prior series to the used car dealer in any quantity he would take.

It is evident that the merchandising methods adopted by these used car dealers brought satisfactory results. They built substantial businesses and prospered. Likewise new car dealers who adopted the same methods of selling used cars have no used car problem.

Criticism of these used car dealers by factory officials, distributors, dealers, association executives, feature and editorial writers has an aspect of the old saying, "Biting the hand that feeds them." There are, of course, unethical dealers among this class, but in all probability the percentage is not greater than among the new car dealers. Castigating used car dealers as a class has become the favorite indoor sport of certain association executives, and that type of inefficient dealer who can be classed as an "amateur" business man, who is not successful and is looking for a way out to save his face.

The legitimate used car dealer is here to stay so long as automobiles are sold or traded before they are worn out. The promotion of harmony and co-operation between new car and used car dealers would be beneficial to the entire industry, and is more worthy of effort than trying to undermine and destroy legitimate business enterprise.

For your information I might cite the following as the policy of this company in its relations with new car dealers and the merchandising of new automobiles:

We buy no unused or unregistered current series automobiles if there is a dealer representing the line in this city, unless the cars are bought from this dealer or with his O. K. Prior series cars we buy from factories, distributors or dealers, marketing them as such.

R. Leslie Kelley.
Kelley Kar Company, Los Angeles, Cal.

Oklahoma Gasoline Tax Decision Sets Precedent

SOME days ago we published a brief news item chronicling the fact that the Federal District Court in Tulsa, Okla., had granted United States Airways, Inc., an injunction restraining the state authorities from collecting the state gasoline tax of 4 cents per gallon on fuel purchased in Oklahoma, the company being engaged in interstate transportation of freight and passengers.

We are now in receipt of the papers in this case, and, as the decision is of widespread interest to the automotive industry, we are subjoining the salient sections of the Federal Court's decree. It may be noted that any appeal from this decision will go to the Supreme Court of the United States, and the general feeling is that no appeal will be taken. Here follows the decree:

"The plaintiffs are concededly engaged in an interstate transportation business, the regulation of which is committed solely to Congress by the commerce clause of the Federal Constitution. If the state Legislature intended by these enactments to tax gasoline bought in the state and consumed by patrons in the conduct of an interstate transportation business by airplanes, then, whether such consumption occurs within or without the state, the tax operates directly to burden interstate commerce, because it is a charge on an instrumentality thereof. The state has no power to regulate or control such commerce, because that power is vested in Congress by the Constitution. Hence, if this tax is levied on gasoline bought in the state by plaintiffs and used by them as the power for the operation of airplanes in their interstate transportation business, it is invalid, because in excess of state power.

"A decision we conceive to be directly in point is Helson vs. Kentucky, 279 U. S. 245. The state law of Kentucky imposed an excise tax on all gasoline sold at wholesale within the state, specified to include 'any and all sales made for the purpose of resale or distribution or use,' and purchases without the state and sold, distributed or used within it. The gasoline which had been purchased in Illinois was used as the motive power on a ferry boat plying between Illinois and Kentucky, and 75 per cent. of it was consumed in the latter state. It was held the tax was 'exacted as the price of the privilege of using an instrumentality of interstate commerce,' directly burdened such commerce and was unconstitutional and invalid. There is no distinction in principle between that case and this, and it is, of course, controlling authority.

"A somewhat different question arises from the exaction of the tax for gasoline used by plaintiffs in their intrastate transportation business. They are engaged in that business in order to efficiently and economically conduct their interstate operations. The essential fact with regard to the question is that the two classes of business are so commingled that the tax cannot be apportioned between them. Where this is so, the proportionate part of license tax cannot be identified and the whole becomes unenforceable. It was so decided in Bowman vs. Continental Oil Company, 256 U. S. 642, and that case settles this controversy in plaintiffs' favor.

The plaintiffs are entitled to a perpetual injunction against the collection by the state of the tax upon gasoline they may hereafter buy in the state for use in their combined interstate and intrastate transportation business. The auditor and the consignees and distributors of gasoline and all others of his agents will be enjoined from demanding or collecting or receiving the tax in question on gasoline, as a part of the price at which it may be sold to the plaintiffs for use in operating their airplanes. The costs will be taxed to the defendant."

NEW CAR REGISTRATIONS DECLINE IN ENGLAND

London, Aug. 21 (UTPS).—The market for motor cars in Great Britain is showing less capacity for absorption and it is to be feared that the decline in the demand will be accentuated, as trade in general is very restricted. The official figures for the first quarter of this year show that the new motor cars licensed during that period totaled 18,848, as compared with 21,112 in the corresponding period of 1929, a drop of 2,264. An analysis by horse power classes, however, shows that there has been a respectable increase in the demand for low-powered cars. In the "baby" class up to 8 horse power the number registered this year was 4,968, against 4,683 in the similar period of 1929, while in the next class up to 15 horse power the increase was much more marked, the figure rising from 1,163 last year to 2,508 in 1930. All classes above this last show reductions.

COMING EVENTS

AUGUST

26-28—**Chicago, Ill.** Society of Automotive Engineers aeronautic meeting in conjunction with National Air Races.

SEPTEMBER

22-26—**Chicago, Ill.** American Society for Steel Treating meeting at Stevens Hotel.

29-Oct. 4—**Pittsburgh, Pa.** National Safety Council Annual Safety Congress.

OCTOBER

2-12—**Paris, France.** Automobile Salon.
6- 7—**Reading, Pa.** Pennsylvania Automotive Association Convention.
6-11—**Washington, D. C.** Sixth International Road Congress.
6-11—**Washington, D. C.** American Road-builders' Association Convention.
7- 8—**Detroit, Mich.** Society of Automotive Engineers production meeting at Book-Cadillac Hotel.
14-15—**Syracuse, N. Y.** New York State Dealers' Association Convention.
16-25—**London, England.** Olympia Motor Show.
22-24—**Pittsburgh, Pa.** Society of Automotive Engineers transportation meeting.

NOVEMBER

4- 7—**Chicago Hl.** National Tire Dealers' Association Convention.
6-16—**Berlin, Germany.** International Automobile Show.
8-15—**Chicago, Ill.** Automobile Salon at Drake Hotel.
10-14—**Cleveland, O.** Motor and Equipment Association Show.
13-23—**Paris, France.** Commercial Vehicle Salon.
17-21—**Cleveland, O.** National Standard Parts Association Show.
30-Dec. 6—**New York.** Automobile Salon at Hotel Commodore.

DECEMBER

6-17—**Brussels, Belgium.** Automobile Exhibition.

JANUARY

3-10—**New York.** National Automobile Show.

WEEKLY BUSINESS INDICATORS

REPRODUCED BY ARRANGEMENT WITH THE SURVEY OF CURRENT BUSINESS

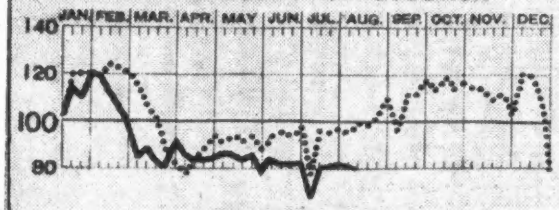
U. S. DEPARTMENT OF COMMERCE

DATA PLOTTED, WHERE AVAILABLE FOR WEEK ENDING AUGUST 16 1930

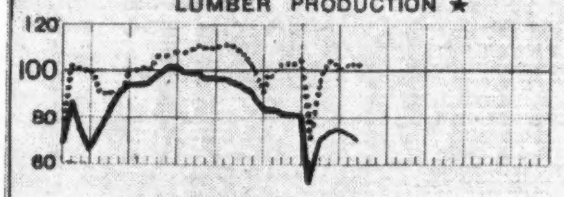
WEEKLY AVERAGE, 1923-1925, INCLUSIVE =100

~LEGEND~
1929
1930

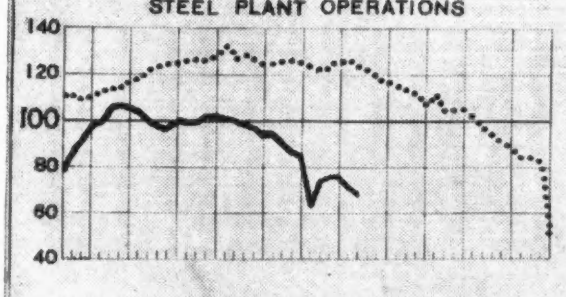
BITUMINOUS COAL, PRODUCTION



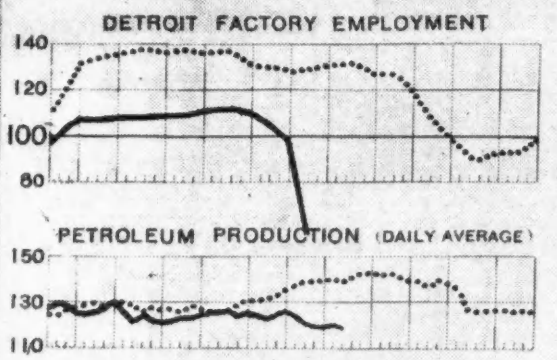
LUMBER PRODUCTION ★



STEEL PLANT OPERATIONS

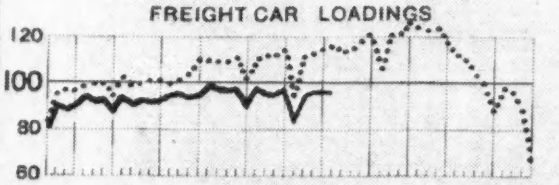


DETROIT FACTORY EMPLOYMENT

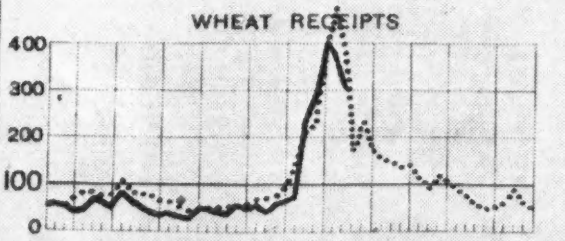


PETROLEUM PRODUCTION (DAILY AVERAGE)

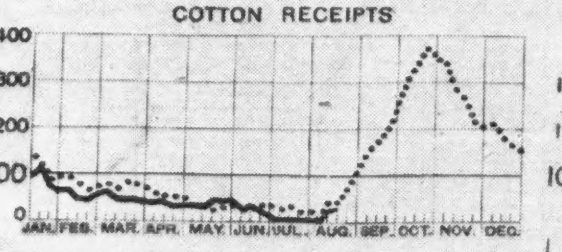
FREIGHT CAR LOADINGS



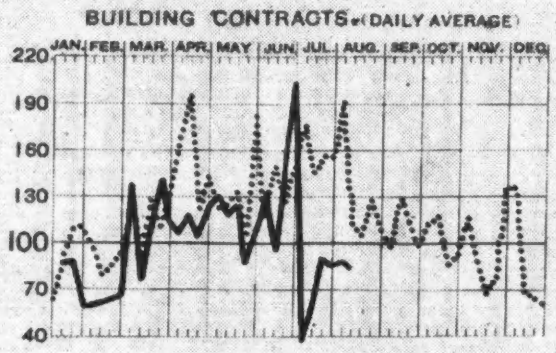
WHEAT RECEIPTS



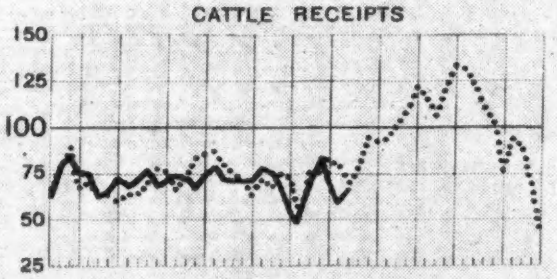
COTTON RECEIPTS



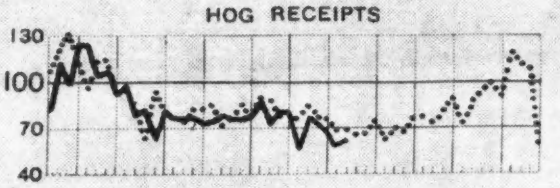
BUILDING CONTRACTS (DAILY AVERAGE)



CATTLE RECEIPTS



HOG RECEIPTS

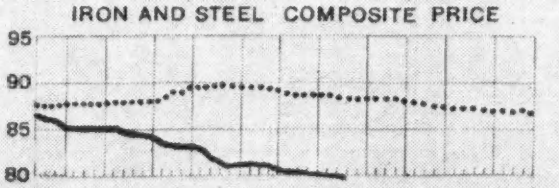


FISHER'S WHOLESALE PRICE INDEX

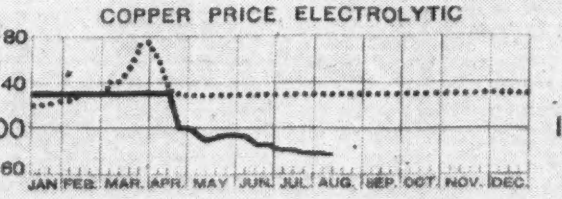
WHEAT PRICE NO. 2 HARD WINTER

COTTON PRICE MIDDLING, NEW YORK

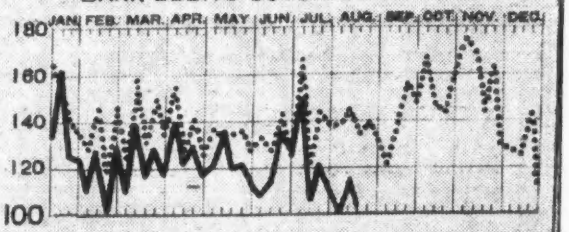
IRON AND STEEL COMPOSITE PRICE



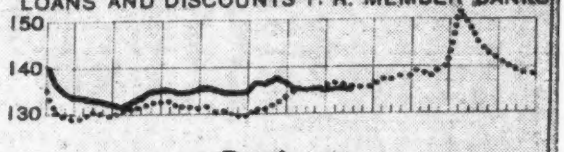
COPPER PRICE ELECTROLYTIC



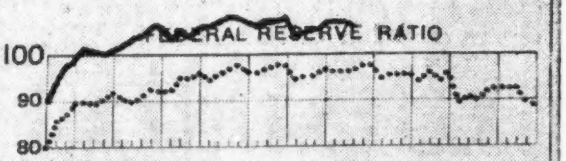
BANK DEBITS OUTSIDE NEW YORK CITY



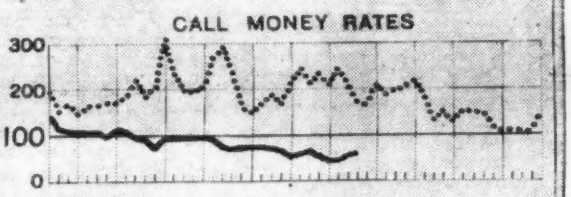
LOANS AND DISCOUNTS F. R. MEMBER BANKS



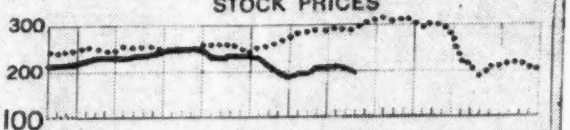
FEDERAL RESERVE RATIO



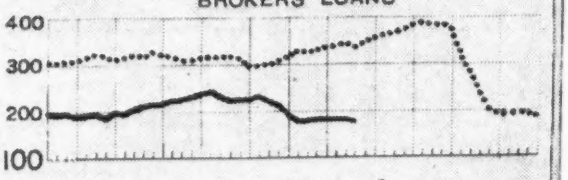
CALL MONEY RATES



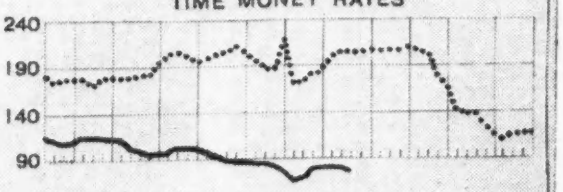
STOCK PRICES



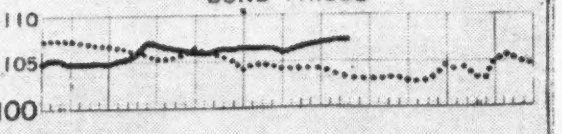
BROKERS' LOANS



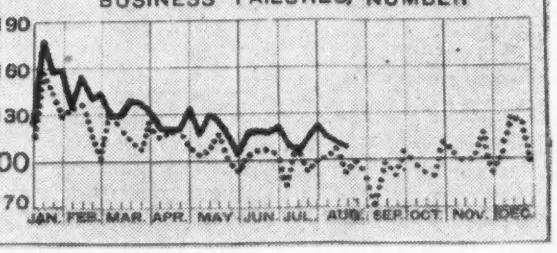
TIME MONEY RATES



BOND PRICES



BUSINESS FAILURES, NUMBER



★ RELATION TO WEEKLY AVERAGES 1927-1929 PER WEEK SHOWN.

STEEL SPRING OUTPUT IN 1929 INCREASES 6.2 P. C.

Washington, Aug. 21.—Production of steel springs for railroad equipment, motor vehicles, carriages, wagons, etc., in 1929 amounted to a valuation of $38,828,466, according to the Bureau of the Census. Wire springs are not included. The total production of steel springs was valued at $47,780,132, a gain of 6.2 per cent. over the $44,977,132 in the corresponding period of last year. The 1929 total is made up as follows: Leaf springs for railroad equipment, motor vehicles, carriages, wagons, etc., $38,828,466; hot-wound springs (railroad), $7,049,581; flat springs made from stampings, $1,644,381, and flat springs, coiled, $257,704. The figures do not include data for the production of motor vehicle spring bumpers, as these are assigned to the motor vehicle parts industry.

C. T. SOMERBY DIES

Newark, N. J., Aug. 21.—Charles T. Somerby, a special representative and executive of the Uppercu Cadillac Corporation, here, died yesterday at his home, 212 Highland Ave., after an illness of four days of blood poisoning. He was 41 years old.

MERCHANDISING ACCESSORIES EQUIPMENT

WHOLESALE

DISTRIBUTION SHOP EQUIPMENT REPLACEMENTS

Jobbers Plan to Meet Oil Distributors' Competition

NEW YORK, Aug. 21.—Jobbers in the metropolitan district see in the move of oil distributors going into the tire business the severest competition that the independent accessories dealer has yet to face.

Not only will they meet the competition from this new angle, but the chain store operators are not sitting by idle to watch results. Instead, the chains have in the past few weeks honeycombed the same territory that the oil distributor occupies or will operate in.

Reports show a tremendous increase in one chain alone, both in New York and New Jersey.

The decision of the oil interests to go into the tire business has been fostered by the success of the mail order houses, which, of late years, have been doing a huge business, particularly in the less densely populated sections of the country. It is estimated that the annual tire business of one concern alone is between $35,000,000 and $40,000,000.

From the viewpoint of the gasoline distributors, however, the most important consideration in determining upon the new policy had been that it offered an oportunity to reduce overhead expenses in the operation of the filling stations.

The mail order houses have been free of the burden of maintaining sales facilities. This has enabled them to undersell the service garages, which have in the past been the chief distributing points for tires. The oil interests have now decided to take advantage of the facilities which they already have, and at the same time aid the business of their filling stations.

They will be priced to undersell the "standard advertised" brands such as are handled by garages, but will sell at slightly higher prices than those distributed through mail order houses. The oil companies plan to offset the additional price, however, by a policy of free service in placing a new tire on the rim or the wheel and by a system of guarantees.

Tires for use on business vehicles will bear a guarantee of six months, while tires for use on private automobiles will be guaranteed for one year. In the case of the latter, new tires or repairs will be provided free in the event of breakdown before five months of use. If breakdown occurs after a longer period of use a refund will be given equal to one-twelfth of the purchase price for each month remaining before the lapse of a year.

The policy went into effect quietly weeks ago in a Pennsylvania company, and distribution is already being made throughout the Standard Oil Company of New Jersey's territory, which covers not only that state, but Maryland, North and South Carolina, Virginia, West Virginia and Delaware. The New Jersey company is said to control a larger number of distribution units than any one other corporation here.

The move is expected to have a wide effect not only in the gasoline field but also among the distributors of automobile accessories. It was seen as further evidence of the tendency to centralization in "big business." In recent years the number of gasoline filling stations has increased enormously, with each large producer of oil seeking every possible outlet for his product.

Competition among producers of gasoline and lubricants has virtually set up a different type of garage, supplanting the individually owned garage in many respects. The effect of the decision of the gasoline distributors to handle tires, it is predicted, will cut into an important source of revenue of the garages.

The policy of the filling stations in providing "free air," free "crankcase service," examination of tires, radiator water, batteries and oil without extra charge, has already tended to draw motorists to the filling stations rather than to garages for their gasoline. The policy of providing every possible service will now simply be extended to the retailing of tires.

The filling station will also enter the field of tire repairing. Instead of owners having to leave faulty tires at a garage and calling for them later, repairs will be made, where possible, immediately. In the cases of tires that have been purchased from filling stations of the company, repairs will be made in many cases free of charge, and a fixed charge will be established for all other repairs.

CLARK

WE could build more, but not better axles than our present

CLARK AXLES

Production demands of the larger passenger vehicle and truck manufacturers have increased our axle production schedules steadily. This marks an ever-growing appreciation of the standard to which we build.

The same precision of design and workmanship produces

CLARK METAL WHEELS with Strength of Steel.

CLARK EQUIPMENT COMPANY
Buchanan Michigan

AXLES
Front & Rear
WHEELS
Single or Dual Tire
CAST STEEL HOUSINGS
TRANSMISSIONS

Editor's Column

REPORTS on three different brake testing campaigns indicate clearly how inspection will divulge needed adjustments or repairs that would have gone unnoticed in other instances.

Brake testing campaigns held in Kansas City, Louisville and Montreal all showed that regular inspection is a desired and needed practice. They show, at the same time, the vast field open to service men who are willing to go out and merchandise preventive maintenance to car owners.

"The Montreal brake testing campaign was highly successful," according to J. Ernest Millen, president and managing director of the John Millen & Son Company, Montreal jobbers and associate members of the Motor and Equipment Association.

"We tested 3,023 cars during the week of June 23 to 28 and found 836, or only 27.6 per cent., O. K. More than half, 1,858, or 61.4 per cent., had defective brakes; 506, or 16.7 per cent., had defective wheels; 492, or 16 per cent., had defective steering apparatus, and 523, or 20.6 per cent., had defective lights."

In a three-day "better brakes" campaign sponsored by the Kansas City Safety Council, in conjunction with the Greater Kansas City Automobile Trade Association, 25,076 cars were tested for braking efficiency alone. These tests indicated that 18,210 of the cars tested were O.K. while 6,866 were rejected and required to have their brakes cared for.

In Louisville, the brake-testing campaign sponsored by the safety council of that city showed that more than 1,500 of the first 4,500 cars tested had faulty brakes.

H. P. LAWSON CO. SELLS INTEREST TO WILLARD

Portland, Ore., Aug. 21.—The H. P. Lawson Company, distributor for Willard Storage Batteries for the past three years, has sold its interest to the Willard Storage Battery Company of California. Possession took place early in August. H. P. Lawson has been associated with the Willard Storage Battery Company for thirteen years, ten of which were spent in Portland,

—known for the trouble—free service they give; and for the efficiency with which they convert engine power into performance.

WISCONSIN AXLE CO.
Oshkosh Wisconsin

Cumulative New Commercial Car Registration Statistics, July, 1930

Returns for today: MISSOURI

States	Autocar	Brockway-Indiana	Chevrolet	Diamond-T	Dodge	Essex	Fargo	Federal	Ford	G. M. C.	International	Mack	Paige	Relay	Reo	Republic	Rugby	Sterling	Stewart	Studebaker	Whippet	White	Willys	Willys-Knight	Miscellaneous	Totals	States
Arkansas		2	236		4		1		310	6	38	1			1						2	6	6		1	608	Arkansas
Delaware	1	2	32		2				56	7	6				1				1		1	1	1			111	Delaware
Florida		7	99		3	1			233	2	19	3			3		1					5	2			378	Florida
Illinois	5	16	516	41	50		2	14	874	34	110	17	2		19	2		8	1		8	21	21		60	1821	Illinois
Minnesota		3	255	11	22	1	7	4	502	21	94	2	1		18		1			1	5	2	21		11	982	Minn.
Missouri	5	8	269	9	25	1	3	4	358	14	70	13	3		8		1	2	1	1	5	2	3		17	822	Missouri
Montana			68		3	1	1	1	123	3	33				5		1				2	1	1			243	Montana
N. Hamp.		1	39	5	6				121	4	5	7			5		2		1	1		1	1		3	202	N. Hamp.
N. Dakota			50	3	2		1		74	1	46				5		2						2			186	N. Dakota
Rh. Island	3	3	41	2	4		2	1	124	9	5	1			3			1	1	1		2				203	R. Island
S. Carolina		1	125					2	171	3	10											1			12	325	S. Car.
S. Dakota		3	71	6	7		1		126	3	50				5		1				2		5		1	281	S. Dakota
Utah			48		4		1		127	4	6	1			1										4	196	Utah
W. Virginia		6	144	3	17			2	202	17	42			3	8	1	3			2		2	4		8	464	West Va.
Wisconsin		8	564	23	40	2	4	11	784	37	125	4		2	23			4	8	4	9	3	24	1	21	1701	Wisconsin
Dist. of Col.	5		27	3	2				105	6	7				1			1				3			5	165	D. of Col.
Totals	19	60	2584	106	191	6	23	39	4290	171	666	49	6	5	106	3	12	16	13	10	34	50	85	1	143	8688	Totals
Ark., 1929		5	400		26		8		513	12	83	1			4		1			4	15	3			11	1086	Ark., 1929
Del., 1929	2	1	57		4				67	10	10				1						1			1		154	Del., 1929
Fla., 1929		3	168		19				351	10	17	1			8					2	3	7				589	Fla., 1929
Ill., 1929	12	14	791	88	159		27	12	1149	49	195	31		2	46	1		10	3		51	23			124	2787	Ill., 1929
Minn., 1929			339	3	48		8	11	471	28	95	4			25		1			4	26	15			20	1098	Minn., '29
Mo., 1929	4	6	325	12	53		5	2	431	31	48	14			14	1	1	3		2	26	5			5	988	Mo., 1929
Mont., 1929			51		12		2		131	4	27				4	1	1			2	3	4				242	Mont., '29
N. H., 1929	1	6	71	1	18		1	2	133	9	15	3			12		1	1	1	1	3	2			1	282	N. H., '29
N. Dak., '29			100	1	13		5	1	98	5	70				2						1				2	298	N. D., 1929
R. I., 1929	3	1	68		26		1	2	88	17	6	13			29		3	4	5	2	3	3			5	279	R. I., 1929
S. Car., '29		16	200		9		10	3	224	5	12	2			1	1	1		1	1	4	2			4	496	S. C., 1929
S. Dak., '29			203	1	19		2	1	175	12	103	1			12		1			3	10	1		1	2	547	S. D., '29
Utah, 1929			53		13				101	8	7				5		2			1	2					192	Utah, '29
W. Va., '29		8	202	3	45		2	3	260	18	48			2	16	1	1		5	3	5	5		1	7	635	W. Va., '29
Wis., 1929	1		499	15	64		10	8	746	39	121	5		2	54		3	17	8	2	35	8		1	24	1662	Wis., 1929
D. of C., '29	1	2	35	5	2				137	6	4	1			4				2		3	14			3	219	D. C., '29
Totals	24	62	3562	129	530	*	81	45	5075	263	861	76	*	6	237	5	16	35	25	27	191	92	*	4	208	11554	Totals

*Not in production at that time.

Major Specifications and Mechanical Details of 1930 Commercial Cars Built in the United States

Make and Model	Capacity—Tons	Chassis Price	Engine	No. of Cyl.	Bore and Stroke	Tax H. P.	Oil System	Carburetor	Fuel Feed	Ignit. System	Gear Set	Location	No. Spds. For.	Rear Axle	Final Drive	Reduction in Low	Brakes, Foot	Brakes, Hand	Standard Wheel Base	Chassis Weight	Standard Tire Sizes Front	Rear
Am. La France Chief	2	3650	Own	6	3¾x5	33.0	Pw	Str	Vac	DR	Own	C	4	Tim	Wo	31.2	4	D	156	6200	32x6	32x6D
Am. La France W	3-4	3950	Own 2 R	4	4¼x6	28.9	CS	Zen	Vac	AB	Own	C	4	Own	2R	47.4	4	R	160	7200	S36x5	S36x5D
Am. La Fran. Chieftain	3-4	5500	Own	6	4⅛x5⅛	40.8	Pw	Zen	Vac	DR	Own	C	4	Tim	Wo	28.8	4	D	175	7200	S36x8	36x8D
Am. La France V	5	5500	Own 5 R	4	4¾x6	36.2	CS	Zen	Vac	AB	Own	C	4	Own	Wo	54.4	4	R	165	9800	S36x5	S40x6D
Am. La Fran. Big Chief	6	6725	Own	6	4½x6	48.6	Pw	Zen	Vac	DR	Own	C	4	Own	2R	32.8	4W	D	226	10600	S40x8	S40x8D
Am. La France Z	6½	5750	Own 5 R	4	4¾x6	36.2	CS	Zen	Vac	AB	Own	C	4	Own	Wo	63.5	4	R	165	10000	S36x7	S40x7D
Am. La France U	7½	6000	Own 5 R	4	4¾x6	36.2	CS	Zen	Vac	AB	Own	C	4	Own	—	63.5	4	R	165	10500	S36x7	S40x8D
Austin	—	*499	Own	4	2.2 x3	7.8	—	Til	—	Aut-L	W-G	U	3	Sal	Sp	—	'	4	75	——	3.75x18	3.75x18
Autocar A	1½-2	2700	Own	6	4 x4¾	38.4	Pw	Str	Vac	DR	Br-L 51	U	4	Own SA	Sp	27.9	4	R	150	5060	32x6	32x6
Autocar D	2-2½	3000	Own	6	4 x4¾	38.4	Pw	Str	Vac	DR	Br-L 51	U	4	Own SD	2R	33.7	4	R	150	5300	32x6	32x6D
*Autocar SH	2½-3	4300	Own	6	4¼x4¾	43.4	Pw	Str	Gra	RB	Own T	U	4	Own H	2R	44.3	R	R	114	6770	34x7	34x7D
Autocar SCH	2½-3	4300	Own	6	4¼x4¾	43.4	Pw	Str	Vac	RB	Own T	U	4	Own H	2R	44.3	R	D	157	6860	34x7	34x7D
*Autocar H	3	4100	Own	4	4½x5½	32.4	CS	Str	Gra	AB	Own T	U	4	Own H	2R	48.6	R	R	114	6770	34x7	34x7D
*Autocar HS	3½	4600	Own	4	4½x5½	32.4	CS	Str	Gra	AB	Own T	U	4	Own C	2R	53.6	R	R	114	7900	40x8	40x8D
*Autocar SHS	3-3½	4800	Own	6	4¼x4¾	43.4	Pw	Str	Gra	RB	Own T	U	4	Own C	2R	53.6	R	R	114	7900	40x8	40x8D
Autocar SCHS	3-3½	4800	Own	6	4¼x4¾	43.4	Pw	Str	Vac	RB	Own T	U	4	Own C	2R	53.6	R	D	157	8180	40x8	40x8D
Autocar TEA	3-3½	5350	Own	6	4¼x4¾	43.4	Pw	Str	Vac	RB	Own T	U	12	Own TE	2R	101.7	4	D	192	8900	36x8	36x8D
Autocar TFA	3½-5	6100	Own	6	4½x4¾	48.6	Pw	Str	Vac	RB	Own T	U	12	Own TF	2R	101.3	4	D	192	9300	38x9	38x9D
Autocar C	3½-5	5500	Own	6	4½x4¾	48.6	Pw	Str	Vac	RB	Own B	C	4	Own C	2R	61.7	R	D	172	9500	42x9	42x9D
Autocar F	7½	6800	Own	6	4½x4¾	48.6	Pw	Str	Vac	RB	Br-L 70	C	7	Tim	Wo	94.0	4	D	173	11000	36x7S	40x8DS
Autocar G	10	9000	Own	6	4½x4¾	48.6	Pw	Str	Vac	RB	Br-L 70	C	7	Tim	Wo	97.7	WB	D	171	13000	36x8	36x8D
Brockway 65	1	1195	Con	6	3⅜x4⅝	27.3	Pw	Zen	Vac	Aut	Br-L	U	3	Col	Sp	21.3	4	Tr	137	3400	30x5	30x5
Brockway 75	1¼	1290	Con	6	3⅜x4⅝	27.3	Pw	Zen	Vac	Aut	Br-L	U	4	Col	Sp	25.6	4	Tr	137	3450	32x6	32x6
Brockway 90	1½	1525	Con	6	3⅜x4⅝	27.3	Pw	Zen	Vac	Aut	Br-L	U	4	Col	Sp	25.6	4	Tr	149	3650	32x6	32x6
Brockway 120	2	1990	Con	6	4 x4⅛	38.4	Pb	Zen	P	Aut	Br-I	U	4	Tim	Sp	—	4	Tr	156	5200	32x6	32x6D
Brockway 140	2	2495	Con	6	4 x4⅛	38.4	Pb	Zen	P	Aut	Br-L	U	4	Wis	2R	—	4HV	D	156	5500	32x6	32x6D
Brockway 170	2½	3160	Con	6	4⅛x4¾	40.8	Pb	Zen	P	Aut	Br-L	U	4	Wis	2R	—	4HV	D	170	6800	32x6	32x6D
Brockway 195	3	3820	Con	6	4⅛x4¾	40.8	Pb	Zen	P	Aut	Br-L	U	4	Wis	2R	—	4HV	D	170	7500	34x7	34x7D
Brockway 190	3	4185	Con	6	4⅛x4¾	40.8	Pb	Str	P	Aut	Br-L	C	7	Tim	Wo	—	RV	D	168½	7625	34x7	34x7D
Brockway 220	3½	4560	Con	6	4⅜x4¾	45.9	Pb	Zen	P	Aut	Br-L	U	4	Wis	2R	—	4HV	D	170	8200	36x8	36x8D
Brockway 250	5	5950	Con	6	4⅜x4¾	45.9	Pb	Str	P	Aut	Br-L	U	4	Tim	Wo	—	4HV	D	182	10000	40x8	40x8D
Brockway 290	7½	7250	Con	6	4¾x5¾	54.15	Pw	Str	P	L-N	Br-L	C	7	Tim	Wo	—	4W	D	182	10750	38x7	40x14S
Brockway 640	10	9700	Con	6	4¾x5¾	54.15	Pw	Str	P	L-N	Br-L	C	7	Tim	Wo	—	4W	R	212	14000	38x7	36x10S
Chevrolet	½	365	Own	6	3⅛x3¾	26.3	CS	Car	P	DR	Own	U	3	Own	Sp	13.61	4	R	107	1835	4.75x19	4.75x19
Chevrolet	1½	520	Own	6	3⅛x3¾	26.3	CS	Car	P	DR	Own	U	4	Own	Sp	33.46	4	R	131	2375	30x5	30x5
Commerce Series S 11	1	1600	Bud H S 6	6	3⅜x4½	27.3	Pb	Zen	Vac	Aut	Br-L 20	U	4	Col 54028	Sp	25.5	4	D	142	3900	30x5P	30x5P
Commerce Series 40	1½	2990	Bud D S 6	6	3⅝x5	31.5	Pb	Zen	Vac	Aut	Br-L 35	U	4	Tim 63702	Wo	34.8	4		168	4700	34x5P	34x5D
Commerce Series S 11	2	2030	Bud H S 6	6	3⅜x4½	27.3	Pb	Zen	Vac	Aut	Br-L 20	U	4	Tim 54000	Sp	29.2	4		162	4500	32x6P	32x6D
Commerce Series 40	2	3240	Bud D S 6	6	3⅝x5	31.5	Pb	Zen	Vac	Aut	Br-L 35	U	4	Tim 63702	Wo	34.8	4		168	4900	36x6	36x6D
Commerce Series 40	2½	3240	Bud D S 6	6	3⅝x5	31.5	Pb	Zen	Vac	Aut	Br-L 35	U	4	Tim 63702	Wo	34.8	4		168	5100	36x6P	36x6D
Commerce Series 60	2½	4580	Bud B A 6	6	4⅛x5⅛	40.8	Pb	Zen	Vac	Aut	Ful	U	5	Tim 65706DH	Wo	63.0	4		175	7000	36x6P	36x6D
Commerce Series 60	3	4680	Bud B A 6	6	4⅛x5⅛	40.8	Pb	Zen	Vac	Aut	Ful	U	5	Tim 65706DH	Wo	63.0	4		175	7100	36x6P	36x6D
Commerce Series 80	3½	5250	Bud B A 6	6	4⅛x5⅛	40.8	Pb	Zen	Vac	Aut	Br-L	C	7	Tim 66700DP	Wo	98.2	B		175	8200	36x6S	36x12S
Commerce Series 80	4	5330	Bud B A 6	6	4⅛x5⅛	40.8	Pb	Zen	Vac	Aut	Br-L	C	7	Tim 66700DP	Wo	98.2	B		175	8400	36x6S	36x12S
Commerce Series 100	5	5830	Bud B A 6	6	4⅛x5⅛	40.8	Pb	Zen	Vac	Aut	Br-L	C	7	Tim 68700DP	Wo	95.0	B		175	9600	36x6S	40x14S
Day Elder 60	1	1195	Con 25 A	6	3⅜x4	27.3	Pw	Zen	P	DR	W-G	U	4	Tim	Sp	36.3	4	D	135	3200	20x6.50B	20x6.50B
Day Elder 85	1½	1645	Con 16 C	6	3⅜x4⅝	27.3	Pw	Zen	P	DR	W-G	U	4	Tim	Sp	42.3	4	D	135	3750	20x6B	20x6.50DB
Day Elder 110	2	2095	Con 16 C	6	3⅜x4⅝	27.3	Pw	Zen	P	DR	Br-L	U	4	Tim	Sp	36.4	4	D	156	4200	20x7B	20x7DB
Day Elder 130	2½	2895	Con 16 R	6	4 x4⅛	33.4	Pw	Zen	P	DR	Br-L	U	4	Tim	Sp	33.0	4	D	150	5300	20x7.50B	20x7.50Db
Day Elder 160	3	3695	Con 18 R	6	4 x4½	33.4	Pw	Zen	P	DR	Br-L	U	4	Tim	Wo	36.1	4	D	156	6900	20x7.50B	20x9DB
Day Elder 200	4	4295	Con 18 R	6	4 x4½	33.4	Pw	Zen	P	DR	Br-L	U	4	Tim	Wo	43.5	4	D	156	7500	20x9B	20x9DB
Day Elder 240	5	5500	Con 21 R	6	4⅜x4¾	45.9	Pw	Zen	V	DR	Br-L	C	4	Tim	Wo	50.8	4	D	162	9200	38x9P	38x9DP
Day Elder 285	8	6000	Con 21 R	6	4⅜x4¾	45.9	Pw	Zen	V	DR	Br-L	C	7	Tim	Wo	71.2	6	D	164	10000	20x8.25B	20x8.25Db
Day Elder 345	10	7500	Con 21 R	6	4⅜x4¾	45.9	Pw	Zen	V	DR	Br-L	C	7	Tim	Wo	79.9	4	D	164	11700	20x9B	20x9DB
Day Elder 402	12	8500	Con 16 H	6	4¾x5¾	54.2	Pw	Zen	P	DR	Br-L	C	7	Tim	Wo	84.6	4	D	164	12800	20x9.75B	20x9.75Db
Diamond T 200	1	785	Bud	4	3¾x4½	22.5	Pw	Zen	P	Aut	W-G	U	4	Cla	Sp	—	4	D	128½	3050	30x5	30x5
Diamond T 215	1	885	Bud	6	3⅜x4	27.3	Pw	Zen	P	Aut	W-G	U	4	Cla	Sp	—	4	D	135⅛	3150	30x5	30x5
Diamond T 290	1½	1475	Her WXA 2	6	3½x4½	29.4	Pb	Zen	Vac	Aut	Cov	U	4	Col	Sp	—	4	D	156¼	4160	30x5	30x5D
Diamond T 303	2	1745	Her WXB	6	3¾x4½	33.7	Pb	Zen	Vac	Aut	Cov	U	4	Tim	Sp	—	4	D	160¾	4850	32x6	32x6D
Diamond T 551	2½	2250	Her WXC	6	4 x4½	38.4	Pb	Zen	Vac	Aut	Cov	U	4	Tim	Sp	—	4	D	168	5600	32x6	32x6D
Diamond T 503	2½	2660	Her WXC	6	4 x4½	38.4	Pb	Zen	Vac	Aut	Cov	U	4	Tim	Wo	—	4	D	174	6200	34x7	34x7D
Diamond T 506	2½	2820	Her WXC	6	4 x4½	38.4	Pb	Zen	Vac	Aut	Cov	U	4	Wis	2R	—	4	D	172½	6300	34x7	34x7D
Diamond T 602	3	3440	Her YXC	6	4⅜x4¾	45.9	Pb	Zen	Gra	Aut	Cov	C	4	Tim	Wo	—	4	D	169½	7500	36x8	36x8D
Diamond T 606	3	3500	Her YXC	6	4⅜x4¾	45.9	Pb	Zen	Gra	Aut	Cov	U	4	Wis	2R	—	4	D	186	7500	36x8	36x8D
Diamond T 700	3½	3740	Her YXC	6	4⅜x4¾	45.9	Pb	Zen	Gra	Aut	Cov	C	4	Tim	Wo	—	R	D	162	8100	S36x5	S36x10
Diamond T 801	4	4140	Her YXC	6	4⅜x4¾	45.9	Pb	Zen	Gra	Aut	Br-L	C	7	Own	Wo	—	6WH	D	189½	8300	36x8	4 wh 36x8
Diamond T 1000	5	4420	Her YXC 2	6	4½x4¾	48.6	Pb	Zen	Gra	Aut	Br-L	C	4	Tim	Wo	—	R	D	170½	9700	S36x6	S40x12
Diamond T 1200	6	5600	Her YXC 2	6	4½x4¾	48.6	Pb	Zen	Gra	Aut	Br-L	C	7	Tim	Wo	—	4RW	D	180	11000	34x7	4 wh 34x7D
Diamond T 1600	8	6220	Her YXC 3	6	4⅝x4¾	51.3	Pb	Zen	Gra	Aut	Br-L	C	7	Tim	Wo	—	4RW	D	190	11700	36x8	4 wh 36x8
Diamond-T 1601	8	7500	Wak 6 R B	6	5 x5¾	60.0	Pb	Zen	Gra	Mag	Br-L	C	7	Tim	Wo	—	4RW	D	194	12500	36x8	4wh 36x8D
Diamond T 2500	10-12	8000	Wak 6 RB	6	5 x5¾	60	Pb	Zen	Gra	Mag	Br-L	C	7	Tim	Wo	—	4RW	D	194	13100	S36x7	4 wh 36x12S
Dodge Bros. U-1	½	545	Own	4	3⅝x4¼	21.3	Pb	Car	Vac	NE	Own	U	3	Own	Sp	14.28	4	D	109	1900	5.00x20B	5.00x20B
Dodge Bros. U-1	¾	695	Own	4	3⅝x4¼	21.3	Pb	Car	Vac	NE	Own	U	3	Own	Sp	21.68	4	D	124	2260	5.50x20B	5.50x20B
Dodge Bros. DA1	¾	795	Own	6	3⅜x3⅞	27.3	Pb	Zen	Vac	NE	Own	U	3	Own	Sp	19.21	4	D	124	2360	5.50x20B	5.50x20B
Dodge Bros. U-1	1	795	Own	4	3⅝x4¼	21.3	Pb	Car	Vac	NE	Own	U	4	Own	Sp	36.13	4	D	133	2590	6.00x20B	32x6
Dodge Bros. DA1	1	895	Own	6	3⅜x3⅞	27.3	Pb	Zen	Vac	NE	Own	U	4	Own	Sp	33.45	4	D	133	2690	6.00x20B	32x6
Dodge Bros. DA1	1	1095	Own	6	3⅜x3⅞	27.3	Pb	Zen	Vac	NE	Own	U	4	Own	Sp	36.83	4	D	140	2955	30x5	30x5
Dodge Bros. DA1	1½	1365	Own	6	3⅜x3⅞	27.3	Pb	Zen	Vac	NE	Own	U	4	Own	Sp	36.83	4	D	150	3695	32x6	32x6
Dodge Bros. DA1	1½	1415	Own	6	3⅜x3⅞	27.3	Pb	Zen	Vac	NE	Own	U	4	Own	Sp	36.83	4	D	165	3810	32x6	32x6
Dodge Bros. DB1	2	1595	Own	6	3⅜x4½	27.3	Pb	Zen	Vac	NE	Own	U	4	Own	Sp	36.83	4	D	150	3930	32x6	34x7
Dodge Bros. DB1	2	1645	Own	6	3⅜x4½	27.3	Pb	Zen	Vac	NE	Own	U	4	Own	Sp	36.83	4	D	165	4070	32x6	34x7
Dodge Bros. DB1	3	1845	Own	6	3⅜x4½	27.3	Pb	Zen	Vac	NE	Own	U	4	Own	Sp	46.31	4	D	135	4235	32x6	32x6D
Dodge Bros. DB1	3	1895	Own	6	3⅜x4½	27.3	Pb	Zen	Vac	NE	Own	U	4	Own	Sp	41.43	4	D	165	4520	32x6	32x6D
Dodge Bros. DB1	3	1945	Own	6	3⅜x4½	27.3	Pb	Zen	Vac	NE	Own	U	4	Own	Sp	46.31	4	D	185	4715	32x6	32x6D
Durant	¾	495	Con	4	3⅜x4¼	18.2	Pb	Til	Vac	Aut	Own	C	3	Own	Sp	16.16	4	4	107	1670	28x4.75	28x4 75
Essex Commercial	¾	445	Own	6	2¾x4½	18.2	CS	Mar	Vac	Aut	Own	U	3	Own	Sp	17.8	4	4	110	2150	30x5	31x5 50
Fargo Packet	½	545	Own	6	3 x4⅛	21.6	Pb	Str	Vac	NE	Own	U	3	Own	Sp	14.29	4	Tr	——	1835	5.00x19	5.00x19
Fargo Clipper	¾	725	Own	6	3⅛x4¼	23.4	Pb	Str	Vac	DR	Own	U	3	Own	Sp	15.53	4	Tr	——	2325	5.50x18	5.50x18
Fargo Freighter	1	795	Own	6	3 x4⅛	21.6	Pb	Str	Vac	NE	Own	U	4	Own	Sp	37.19	4	Tr	——	2785	6.00x20	32x6
Federal E6	1½	1090	Con 17 E	6	3⅜x4	27.3	Pb	Zen	Vac	DR	W-G T9	U	4	Cla B370	Sp	34.6	4	Tr	132	3260	6.00x20	32x6
Federal D	1-1½	830	Con W 10	4	3⅞x4¼	24.0	Pb	Zen	P	DR	W-G T9	U	4	Cla B372	Sp	40.8	4	Tr	131	3185	6.00x20	32x6
Federal F7	1½	1525	Con 16 C	6	3⅜x4⅝	27.3	Pb	Zen	P	DR	Own	U	4	Tim 52005H	Sp	24.3	4	Tr	132	3765	30x5	30x5D
Federal A6	2	1855	Con 16 C	6	3⅜x4⅝	27.3	Pb	Zen	Vac	DR	Own	C	4	Cla B610	Sp	38.5	4	Tr	151	4580	32x6	32x6D
Federal A6T	2½	2185	Con 16 C	6	3⅜x4⅝	27.3	Pb	Zen	Vac	DR	Own	C	4	Tim 58000H	Sp	41.3	4	Tr	151	4950	32x6	32x6D
Federal A 6 T W	2½	2360	Con 16 C	6	3⅜x4⅝	27.3	Pb	Zen	Vac	DR	Own	C	4	Tim 65001 H	Wo	42.0	4	Tr	151	4950	32x6	32x6D
Federal T10B	2½-3	2740	Con 16 R	6	4 x4⅛	38.4	Pb	Zen	P	DR	Own	C	4	Tim 58000H	Sp	36.3	4	Tr	165	6550	34x7	34x7D
Federal T10W	2½-3	2915	Con 16 R	6	4 x4⅛	38.4	Pb	Zen	P	DR	Own	C	4	Tim 65001H	Wo	44.0	4	Tr	165	6550	34x7	34x7D
Federal U6	3-3½	3860	Con 18 R	6	4 x4½	38.4	Pb	Str	P	DR	Br-L 55	C	7	Tim 65706HP	Wo	64.6	4	D	165	7220	34x7	34x7D
Federal 4C6A	4-5	4735	Con 20 R	6	4⅛x4¾	40.8	Pb	Zen	P	DR	Br-L 55	C	7	Tim 66704HP	Wo	73.6	4	D	192	8330	36x8	36x8D
Federal 4C6AB	4-5	4960	Con 20 R	6	4⅛x4¾	40.8	Pb	Zen	P	DR	Br-L 55	C	7	Tim 66704TWP	Wo	73.6	4	D	192	8850	36x8	36x8D
*Federal U 6 S W	6	6000	Con 20 R	6	4⅛x4¾	40.8	Pb	Zen	P	DR	Br-L 55	C	7	Tim S W 200	Wo	71.3	6	Tr	201	9850	34x7	34x7D
*Federal U 6 S W A B	6	6500	Con 20 R	6	4⅛x4¾	40.8	Pb	Zen	P	DR	Br-L 55	C	7	Tim S W 200	Wo	71.3	4	Tr	201	9900	34x7	34x7D
Federal X8	7½	5085	Con B 7	4	5 x6	40	Pw	Zen	Vac	AB	Br-L 60	C	7	Tim 68700DP	Wo	110.9	R	D	162	9750	36x6S	40x14S
Federal X8R	7½	5810	Con 21 R	6	4⅜x4¾	45.9	Pb	Zen	P	DR	Br-L 60	C	7	Tim 68700DP	Wo	110.9	R	D	162	10000	40x8	40x8D
*Federal 4 C 6 S W	8	7500	Con 21 R	6	4⅜x4¾	45.9	Pb	Zen	P	DR	Br-L 55	C	7	Tim S W 300	Wo	80.8	4	Tr	231	11500	36x8	36x8D
Ford AA	1½	520	Own	4	3⅛x4¼	24.0	Sp	Zen	Gra	Own	Own	U	4	Own	St	42.24	4	R	131½	2792	6.00x20	32x6
Ford AA	1½	545	Own	4	3⅛x4¼	24.0	Sp	Zen	Gra	Own	Own	U	4	Own	St	42.24	4	R	157	2570	6.00x30	6.00x30D
F. W. D.—H	1½	3300	Wis S U	4	4 x5	25.6	Pb	Zen	Vac	Eis	Cotta	C	4	Own	St	38.1	4	R	121	5300	34x7	34x7
F. W. D.—H 6	2	3425	Wak	6	3½x4½	29.4	Pb	Zen	Vac	Eis	Br-L	U	4	Own	St	35.0	4	R	133	5500	34x7	34x7
F. W. D.—BTL 4	2	3900	Wis S U	4	4 x5	25.6	Pb	Zen	Vac	Eis	Br-L	C	7	Own	St	84.7	4	R	120	6000	36x8	36x8
F. W. D.—HH 6	2½	4000	Wak	6	3¾x4½	33.7	Pb	Zen	Vac	Eis	Br-L	C	7	Own	St	101.0	4	R	133	5700	36x8	36x8
F. W. D.—B	3	4200	Own	4	4¾x5½	36.1	Pb	Str	Gra	Eis	Own	C	3	Own	St	35.6	4	R	124	6460	36x6S	36x6S

MAJOR SPECIFICATIONS AND MECHANICAL DETAILS OF

Make and Model	Capacity—Tons	Chassis Price	Engine	No. of Cyl.	Bore and Stroke	Tax H. P.	Oil System	Carburetor	Fuel Feed	Ignit. System	Gear Set	Location	No. Spds. For.	Rear Axle	Final Drive	Reduction in Low	Brakes, Foot	Brakes, Hand	Standard Wheel Base	Chassis Weight	Standard Tire Sizes Front	Rear
F. W. D.—B 5	3	4525	Own	4	4¾x5½	36.1	Pb	Str	Gra	Eis	Own	C	5	Own	St	88.6	4	R	132	6800	36x6S	36x6S
F. W. D.—B T	3	4742	Own	4	4¾x5½	36.1	Pb	Str	Vac	Eis	Own	C	5	Own	St	101.0	4	R	133¾	7700	40x7S	40x5SD
F. W. D.—U 4	3	4575	Own	4	4¾x5½	36.1	Pb	Str	Vac	Eis	Own	C	5	Own	St	88.6	4	R	148	7000	36x6S	36x6S
F. W. D.—C U 6	3½	5120	Wak	6	4 x4¾	38.6	Pb	Zen	Vac	Eis	Own	C	5	Own	St	88.6	4	R	148	7200	36x6S	36x8S
*F. W. D.—X 6	6	6500	Wak	6	4¼x4¾	43.3	Pb	Zen	Vac	Eis	Own	C	5	Own	St	88.6	*	4	170	9500	36x8	36x8
Garford Series S 11	1	1600	Bud H S 6	6	3⅜x4½	27.3	Pb	Zen	Vac	Aut	Br-L	U	4	Col	Sp	25.5	4	D	142	3900	30x5	30x5
Garford Series S 11	1½	1900	Bud H S 6	6	3⅜x4½	27.3	Pb	Zen	Vac	Aut	Br-L	U	4	Tim	Sp	29.2	4	D	162	4300	30x5	D30x5
Garford Series 40	1½	2990	Bud D S 6	6	3⅝x5	31.5	Pb	Zen	Vac	Aut	Br-L	U	4	Tim	Wo	34.8	4	D	168	4700	34x5	D34x5
Garford Series S 11	2	2030	Bud H S 6	6	3⅜x4½	27.3	Pb	Zen	Vac	Aut	Br-L	U	4	Tim	Sp	29.2	4	D	162	4500	32x6	D32x6
Garford Series 40	2	3240	Bud D S 6	6	3⅝x5	31.5	Pb	Zen	Vac	Aut	Br-L	U	4	Tim	Wo	34.8	4	D	168	4900	36x6	D36x6
Garford Series 40	2½	3240	Bud D S 6	6	3⅝x5	31.5	Pb	Zen	Vac	Aut	Br-L	U	4	Tim	Wo	34.8	4	D	168	5100	36x6	D36x6
Garford Series 60	2½	4580	Bud B A 6	6	4⅛x5⅛	40.8	Pb	Zen	Vac	Aut	Ful	U	5	Tim	Wo	63.0	4	D	175	7000	36x6	D36x6
Garford Series 60	3	4680	Bud B A 6	6	4⅛x5⅛	40.8	Pb	Zen	Vac	Aut	Ful	U	5	Tim	Wo	63.0	4	D	175	7100	36x6	D36x7
Garford Series 80	3½	5250	Bud B A 6	6	4¼x5⅛	40.8	Pb	Zen	Vac	Aut	Br-L	C	7	Tim	Wo	98.2	4	D	175	8200	S36x6	S36x12
Garford Series 80	4	5330	Bud B A 6	6	4¼x5⅛	40.8	Pb	Zen	Vac	Aut	Br-L	C	7	Tim	Wo	98.2	4	D	175	8400	S36x6	S36x14
Garford Series 100	5	5830	Bud B A 6	6	4⅛x5⅛	40.8	Pb	Zen	Vac	Aut	Br-L	C	7	Tim	Wo	95.0	4	D	175	9600	S36x6	S40x14
Gen. Mot. T11-1001	*3800	625	Pontiac	6	3 3/16x3⅞	26.3	Pb	Mar	P	DR	Own	U	3	Pontiac	Sp	14.7	4	4	109⅝	1980	5.00x19B	5.50x19B
Gen. Mot. T15-1501	*5400	695	Pontiac	6	3 3/16x3⅞	26.3	Pb	Mar	P	DR	Own	U	3	Tim 51500	Sp	16.14	4	4	130	2625	5.50x20B	5.50x20B
Gen. Mot. T17-1701	*5500	735	Pontiac	6	3 3/16x3⅞	26.3	Pb	Mar	P	DR	Own	U	3	Tim 51505	Sp	16.04	4	4	130	2650	6.50x20B	6.50x20B
Gen. Mot. T19-2201	*6300	895	Pontiac	6	3 3/16x3⅞	26.3	Pb	Mar	P	DR	Mun	U	4	Tim 5261	Sp	34.45	4	D	130	2850	5.50x20B	32x6
Gen. Mot. T17-1707	*6500	750	Pontiac	6	3 3/16x3⅞	26.3	Pb	Mar	P	DR	Own	U	3	Tim 51505	Sp	16.04	4	4	130	2670	5.50x20B	32x6
Gen. Mot. T25-2501	*6800	1235	Buick	6	3 7/16x4⅝	28.3	Pb	Mar	P	DR	Mun	U	4	Tim 5261	Sp	29.62	4	D	130	3375	6.00x20B	7.50x20B
Gen. Mot. T19-2214	*8500	985	Pontiac	6	3 3/16x3⅞	26.3	Pb	Mar	P	DR	Mun	U	4	Tim 5261	Sp	34.45	4	D	130	2925	30x5	30x5D
Gen. Mot. T25-2509	*8500	1280	Buick	6	3 7/16x4⅝	28.3	Pb	Mar	P	DR	Mun	U	4	Tim 5261	Sp	29.62	4	D	130	3425	30x5	30x5D
Gen. Mot. T30-3206	*9000	1555	Buick	6	3 7/16x4⅝	28.3	Pb	Mar	P	DR	Mun	U	4	Eat 1617	Sp	28.6	4	D	141	4450	6.00x20B	8.25x20B
Gen. Mot. T42-4206	*10600	1735	Buick	6	3 7/16x4⅝	28.3	Pb	Mar	P	DR	Mun	U	4	Eat 1717	Sp	33.38	4	D	141	4575	7.00x20B	9.00x20B
Gen. Mot. T30-3203	*11000	1605	Buick	6	3 7/16x4⅝	28.3	Pb	Mar	P	DR	Mun	U	4	Eat 1617	Sp	28.6	4	D	141	4525	32x6	32x6D
Gen. Mot. T44-4401	*12000	1965	Buick	6	3 7/16x4⅝	28.3	Pb	Mar	P	DR	Mun	U	4	Eat T44DR	2R	40.89	4	D	141	4825	32x6	32x6D
Gen. Mot. T42-4203	*14000	1960	Buick	6	3 7/16x4⅝	28.3	Pb	Mar	P	DR	Mun	U	4	Eat 1717	Sp	33.38	4	D	141	4905	36x6	36x6D
Gen. Mot. T44-4404	*15000	2095	Buick	6	3 7/16x4⅝	28.3	Pb	Mar	P	DR	Mun	U	4	Eat T44DR	2R	40.89	4	D	141	5095	34x7	34x7D
Gen. Mot. T60-6202	*16500	3035	Buick	6	3¾x5	33.7	Pb	Mar	P	DR	Mun	U	4	Tim 65706	Wo	52.53	4	D	154¼	6925	34x7	34x7D
Gen. Mot. T60-6205	*18500	3125	Buick	6	3¾x5	33.7	Pb	Mar	P	DR	Mun	U	4	Tim 65706	Wo	52.53	4	D	154¼	6925	9.00x20B	9.00x20DB
Gen. Mot. T82-8202	*19000	3795	Buick	6	3¾x5	33.7	Pb	Mar	P	DR	Br-L	C	5	Tim 66704	Wo	82.2	4	D	155	7850	38x7	38x9D
Gen. Mot. T82-8207	*22000	4070	Buick	6	3¾x5	33.7	Pb	Mar	P	DR	Br-L	C	5	Tim 66704	Wo	82.2	4	D	155	9400	7.50x20B	7.50x20D
Gen. Mot. T90-9001	*23000	5885	Buick	6	3¾x5	33.7	Pb	Mar	P	DR	Br-L	C	5	Tim SW-200	Wo	76.04	WR	D	185¼	9775	8.25x20B	8.25x20DB
Gen. Mot. T90-9004	*28000	6055	Buick	6	3¾x5	33.7	Pb	Mar	P	DR	Br-L	C	5	Tim SW-200	Wo	76.04	WR	D	185¼			
*Gramm B	1½	1495	Lyc 4 SL	6	3¼x4½	25.3	Pb	Zen	Vac	Aut	Cov	U	4	Tim	Sp	34.3	4	Tr	140	3800	30x5	30x5D
*Gramm C	2	1795	Lyc ASA	6	3⅝x4½	31.54	Pb	Zen	P	Aut	Cov	U	4	Tim	Sp	31	4	Tr	160	4820	32x6	32x6D
*Gramm D	2½	2195	Lyc TS	6	3⅞x5	36	Pb	Zen	P	Aut	Cov	U	4	Tim	Sp	33	4	Tr	160	5100	32x6	32x6D
*Gramm E	3	2595	Lyc TS	6	3⅞x5	36	Pb	Zen	P	Aut	Ful	U	4	Tim	Sp	35	4	Tr	160	5300	34x7	34x7D
*Gramm EY	3	3595	Con 20 R	6	4¼x4¾	40.80	Pb	Zen	P	Aut	Ful	U	4	Tim	Sp	30	4	D	190	6750	32x6	32x6D
*Gramm O-35	3	3595	Lyc TS	6	3⅞x5	36	Pb	Zen	P	Aut	Ful	U	4	Wis	2R	71.2	D	R	153	7200	36x5S	36x10S
*Gramm T-38	3	3595	Lyc TS	6	3⅞x5	36	Pb	Zen	P	Aut	Ful	U	4	Wis	2R	45	D	R	153	7200	36x5S	36x10S
*Gramm O-45	4	3995	Lyc TS	6	3⅞x5	36	Pb	Zen	P	Aut	Ful	C	8	Wis	2R	75.8	D	R	153	7700	36x5S	36x12S
*Gramm T-48	4	3995	Lyc TS	6	3⅞x5	36	Pb	Zen	P	Aut	Ful	U	4	Wis	2R	47	D	R	153	7700	36x5S	36x12S
*Gramm GY	4	4345	Con 21 R	6	4⅜x4¾	45.9	Pb	Zen	P	Aut	Ful	U	4	Wis	2R	28	4	D	210	7200	34x7	34x7D
*Gramm O-60	5	4745	Lyc TS	6	3⅞x5	36	Pb	Zen	P	Aut	Ful	C	8	Wis	2R	78.4	D	R	153	8800	36x6S	36x14S
*Gramm HY	5	6545	Con 16 H	6	4¾x5¾	54.15	Pb	Zen	P	Aut	Ful	U	4	Wis	2R	25.2	4	D	236	9600	36x8	36x8D
Indiana 64	1	1195	Con	6	3⅜x4⅝	27.3	Pb	Str	Vac	Aut	Br-L	U	3	Col	Sp	21.3	4	Tr	137	3435	30x5	30x5
Indiana 74	1¼	1290	Con	6	3⅜x4⅝	27.3	Pb	Str	Vac	Aut	Br-L	U	4	Col	Sp	25.6	4	Tr	137	3450	32x6	32x6
Indiana 11	1¼	1423	Her	4	4 x5	25.6	Pb	Str	Gra	Aut	Br-L	U	3	Cla	Sp	24.48	R	R	129½	3500	30x5	30x5
Indiana 89	1½	1525	Con	6	3⅜x4⅝	27.3	Pb	Str	Vac	Aut	Br-L	U	4	Col	Sp	25.6	4	Tr	149	3650	32x6	32x6
Indiana 111	1½	1630	Her	4	4 x5	25.6	Pb	Str	Gra	Aut	Br-L	U	3	Cla	Sp	26.4	R	R	129½	3600	30x5	32x6
Indiana 111 XW	2	1850	Her	4	4 x5	25.6	Pb	Str	Vac	Eis	Br-L	U	4	Wis	2R	30.14	R	Tr	120	3740	32x6	32x6D
Indiana 120	2	1990	Con	6	4 x4⅛	38.4	Pb	Str	P	Aut	Br-L	U	4	Tim	Sp	—	4	Tr	156	5200	32x6	32x6D
Indiana 140	2	2495	Con	6	4 x4⅛	38.4	Pb	Str	P	Aut	Br-L	U	4	Wis	2R	—	4V	Tr	156	5500	32x6	32x6D
Indiana 115 A	2½	2740	Her	4	4¼x5	28.9	Pb	Str	Vac	Eis	Br-L	U	4	Cla	Sp	42.99	R	Tr	132	4970	32x6	34x7D
Indiana 615 A	2½	3070	Wis	6	3⅜x5	27.34	Pb	Str	Vac	Eis	Br-L	U	4	Cla	Sp	46.29	R	Tr	136	5160	32x6	32x6D
Indiana 170	2½	3160	Con	6	4⅛x4¾	40.8	Pb	Str	ł	Aut	Br-L	U	4	Wis	2R	—	4HV	D	170	6800	32x6	32x6D
Indiana 127 AW	3	3775	Her	4	4¼x5	28.90	Pb	Str	Vac	Eis	Br-L	U	5	Wis	2R	41.72	RV	D	158¼	7000	34x7	34x7D
Indiana 627 AW	3	4075	Wis	6	4 x5	38.40	Pb	Str	Vac	Eis	Br-L	U	5	Wis	2R	41.72	RV	D	156¼	7200	34x7	34x7D
Indiana 195	3	3820	Con	6	4⅛x4¾	40.8	Pb	Str	P	Aut	Br-L	U	4	Wis	2R	—	4HV	D	170	7500	34x7	34x7D
Indiana 190	3	4185	Con	6	4⅛x4¾	40.8	Pb	Str	P	Aut	Br-L	C	7	Tim	Wo	—	RV	D	168½	7625	34x7	34x7D
Indiana 220	3½	4560	Con	6	4⅜x4¾	45.9	Pb	Str	P	Aut	Br-L	U	4	Wis	2R	—	4HV	D	170	8200	36x8	36x8D
Indiana 250	5	5950	Con	6	4⅜x4¾	45.9	Pb	Str	P	Aut	Br-L	U	4	Tim	Wo	—	4HMV	D	182	10000	40x8	40x8D
Indiana 290	7	7250	Con	6	4¾x5¾	54.15	Pb	Str	P	L-N	Br-L	C	7	Tim	Wo	—	4W	D	182	10750	38x7	40x14S
Indiana 640	10	9700	Con	6	4¾x5¾	54.15	Pb	Str	P	L-N	Br-L	C	7	Tim	Wo	—	4RW	D	212	14000	38x7	36x10S
International AW-1	¾	720	Wak X A	4	3½x4½	19.6	Pb	Zen	Vac	DR	Mec	U	3	Eat 517	Sp	17.4	4	2	136	2620	5.25x20	5.25x20
Int. Harvester Sp. Del.	¾	720	Wak X A	4	3½x4½	19.6	Pb	Zen	Vac	DR	Mec	U	3	Eat 502 R	Sp	15.1	4	2	124	2200	30x5.25	30x5.25
Int. Harv. 6 Spd. Spec.	1	820	Wak X A	4	3½x4½	19.6	Pb	Zen	Vac	DR	Mec	U	3	Eat 1124	Sp	52.6	4	2	124	2430	30x5	30x5
Int. Harvester S-24	1¼	1160	Lyc C T	4	3¾x5	22.5	Pw	Zen	Vac	DR	Own	U	3	Eat 1002	Sp	21.3	4	2	130	3200	30x5	30x5
Int. Harvester S-26	1¼	1310	Lyc 4 S L	6	3¼x4½	25.3	Pb	Zen	Vac	DR	Own	U	3	Eat 1002	Sp	21.3	4	2	130	3250	30x5	30x5
Int. Harvester SF-34	1½	1450	Lyc C T	4	3¾x5	22.5	Pw	Zen	Vac	DR	Own	U	3	Eat 1502	Sp	22.6	4	2	140	3520	30x5	32x6
International AL-3	1½	1450	Lyc SLH	6	3¼x4½	25.3	Pb	Zen	Vac	DR	W-G	U	4	Eat 1518	Sp	42.9	4	2	138	4300	6.00x20	6.00x20D
Int. Harvester SF-36	1½	1600	Lyc 4 S L	6	3¼x4½	25.3	Pb	Zen	Vac	DR	Own	U	3	Eat 1502	Sp	22.6	4	2	140	3570	30x5	32x6
Int. Harvester SD-44	2	1590	Lyc C T	4	3¾x5	22.5	Pw	Zen	Vac	AB	Own	U	4	Eat 2002	Sp	40.6	4	2	117	3700	30x5	32x6
Int. Harvester SD-46	2	1740	Lyc 4 S L	6	3¼x4½	25.3	Pb	Zen	Vac	AB	Own	U	4	Eat 2002	Sp	40.6	4	2	117	3750	30x5	32x6
Int. Harvester SF-46	2	1950	Lyc 4 S L	6	3¼x4½	25.3	Pb	Zen	Vac	DR	Own	U	4	Eat 2002	Sp	40.6	4	2	140	4000	32x6	32x6D
Int. Harvester A-4	2	1985	Own-FBB	6	3⅝x4½	31.5	Pb	Zen	Vac	DR	Own	U	5	Eat 1712	Sp	47.8	4	2	145	5070	32x6	32x6D
Int. Harvester HS-54	2½	3850	Hall-S 151	4	4¼x5½	28.9	Pb	Zen	Vac	RB	Own	U	5	Eat 54	2R	60.5	4	4	148	8000	36x5S	36x8S
Int. Harvester HS-54-C	2½	3850	Hall-S 151	4	4¼x5½	28.9	Pb	Zen	Vac	RB	Own	U	5	Own A M 428	Ch	63.8	4	4	148	8665	36x5S	36x10S
Int. Harvester W-1	2½	3850	Hall-S 151	4	4¼x5½	28.9	Pb	Zen	Vac	RB	Own	U	5	Eat 58	2R	60.5	4	2	148	8300	36x5S	36x8S
Int. Harvester A-5	3	2550	Own-FBB	6	3⅝x4½	31.5	Pb	Zen	Vac	DR	Own	U	5	Eat 2112	Sp	52.5	4	2	156	5606	34x7	34x7D
Int. Harvester HS-74	3½	4850	Hall-S 152	4	4⅜x5½	36.1	Pb	Zen	Vac	RB	Own	U	5	Eat 74	2R	70.5	4	4	160	10700	36x5S	40x12S
Int. Harvester HS-74-C	3½	4850	Hall-S 152	4	4⅜x5½	36.1	Pb	Zen	Vac	RB	Own	U	5	Own A M 427	Ch	79.1	4	4	160	11000	36x6S	40x12S
Int. Harvester W-2	3½	4850	Hall-S 152	4	4⅜x5½	36.1	Pb	Zen	Vac	RB	Own	U	5	Eat 78	2R	70.5	4	2	160	10125	36x6S	40x12S
Int. Harv's'r HS-104-C	5	5500	Hall-S 152	4	4⅜x5½	36.1	Pb	Zen	Vac	RB	Own	U	5	Own A M 427	Ch	90.5	4	4	160	11095	36x6S	40x14S
La France-Repub. A-1	*6000	990	Lyc	6	2⅞x4¾	19.8	Pb	Zen	Vac	Aut	Ful	U	4	Tim	Sp	36.1	4	Tr	132	3000	5.50x20	32x6
La France-Repub. C-1	*7000	1295	Lyc	6	3¼x4½	25.4	Pb	Zen	Vac	Aut	Br-L	U	4	Tim	Sp	29.1	4	Tr	144	3300	6.00x20	32x6
La France-Repub. D-1	*9000	1595	Lyc	6	3¼x4½	25.4	Pb	Zen	Vac	Aut	Ful	U	4	Tim	Sp	37.9	4	Tr	144	3725	30x5	30x5D
La France-Repub. F-2	*13000	2395	Lyc	6	3⅝x5	31.5	Pb	Zen	Vac	Aut	Ful	U	4	Tim	Sp	40.1	4	D	174	5870	32x6	32x6D
La France-Repub. H-1	*15000	2985	Lyc	6	3⅞x5	36.0	Pb	Zen	Vac	Aut	Ful	U	4	Eat	Sp	36.0	4	D	163	5850	34x7	34x7D
La France-Repub. L-1	*18000	3595	Lyc	6	3⅞x5	36.0	Pb	Zen	Vac	Aut	Ful	U	4	Eat	2R	48.0	4	D	180	6900	36x8	36x8D
La France-Repub. M-1	*20000	3800	Wak	6	4 x4¾	38.4	Pb	Zen	Vac	Aut	Ful	U	5	Eat	2R	62.3	R	D	171	6900	36x8	36x8D
Mack BL	1	2500	Own	6	3¼x5	25.39	Pw	Str	Vac	NE	Own	U	4	Own	Sp	Opt	4	D	148	——	B6.00x20	DB6.00x20
††Mack BG	1½	3000	Own	6	3⅝x5	31.57	Pw	Str	Vac	NE	Own	U	4	Own	Sp	Opt	4	D	138-156	——	32x6	D32x6
Mack AB	2½-3	3950	Own	4	4¼x5	28.9	Pb	Str	Gra	RB	Own	U	4	Own	2R	Opt	R	D	2-Opt	——	36x4S	36x8S
††Mack AB	2½-3	3500	Own	4	4¼x5	28.9	Pb	Str	Gra	RB	Own	U	4	Own	Ch	Opt	R	D	2-Opt	——	36x4S	36x8S
Mack AB	2½-3	4750	Own	6	3⅝x5	31.57	Pw	Str	Vac	NE	Own	U	4	Own	2R	Opt	R	D	2-Opt	——	34x7	D34x7
††Mack AB	2½-3	4300	Own	6	3⅝x5	31.57	Pw	Str	Vac	NE	Own	U	4	Own	Ch	Opt	R	D	2-Opt	——	34x7	D34x7
††Mack BC	3½-4	4250	Own	4	4¼x5	28.9	Pb	Str	Gra	RB	Own	U	4	Own	2R	Opt	4	D	2-Opt	——	36x5S	36x5DS
††Mack BC	3½-4	5250	Own	6	4 x5½	38.4	Pb	Str	Vac	NE	Own	U	4	Own	2R	Opt	4	D	2-Opt	——	34x7	D36x8
††Mack BJ	3½-5	6150	Own	6	4½x5½	48.6	Pb	Str	Vac	NE	Own	C	4	Own	2R	Opt	4	D	3-Opt	——	36x8	36x8D
††Mack AK	3½-5	5150	Own	4	5 x6	40.0	Pb	Str	Gra	RB	Own	J	4	Own	Ch	Opt	4	J	3-Opt	——	36x5S	36x5DS
††Mack AK	3½-5	5250	Own	4	5 x6	40.0	Pb	Str	Gra	RB	Own	C	4	Own	2R	Opt	4	D	3-Opt	——	36x5S	36x5DS
††Mack AC	3½-5	4950	Own	4	5 x6	40.0	Pb	Str	Gra	RB	Own	J	4	Own	Ch	Opt	J	R	3-Opt	——	36x5S	40x10S
††Mack AC	5½-7	5500	Own	4	5 x6	40.0	Pb	Str	Gra	RB	Own	J	4	Own	Ch	Opt	J	R	3-Opt	——	36x6S	40x12S
††Mack AC	7½	6000	Own	4	5 x6	40.0	Pb	Str	Gra	RB	Own	J	4	Own	Ch	Opt	J	R	3-Opt	——	36x7S	40x14S
††Mack AP	7½	9500	Own	6	5 x6	60.0	Pb	Str	Gra	NE	Own	J	4	Own	Ch	Opt	R	J	191	——	36x7S	40x8DS
Mack AC 6-wheel	10	7500	Own	4	5 x6	40.0	Pb	Str	Gra	RB	Own	J	4	Own	Ch	Opt	4R	J	3-Opt	——	36x7S	40x12S
Mack AP 6-wheel	10	12000	Own	6	5 x6	60.0	Pb	Str	Gra	NE	Own	J	4	Own	Ch	Opt	4R	J	3-Opt	——	36x7	40x12S
Paige	¾	860	Own	6	3¼x4½	25.35	Pb	DL	P	DR	W-G	U	3	Sal	Sp	17.36	4	Tr	115	2465	B5.50x19	B5.50x19
Relay Series 15	¾	1370	Con 17 E	6	3⅜x4	27.3	Pb	Str	Vac	Aut	W-G	U	4	Own	R	38.4	4	D	131	3750	30x5P	30x5P

1930 COMMERCIAL CARS BUILT IN THE UNITED STATES

Make and Model	Capacity—Tons	Chassis Price	Engine	No. of Cyl.	Bore and Stroke	Tax H. P.	Oil System	Carburetor	Fuel Feed	Ignit. System	Gear Set	Location	No. Spds. For.	Rear Axle	Final Drive	Reduction in Low	Brakes, Foot	Brakes, Hand	Standard Wheel Base	Chassis Weight	Standard Tire Sizes — Front	Rear
Relay Series 15	1	1400	Con 17 E	6	3⅜x4	27.3	Pb	Str	Vac	Aut	W-G	U	4	Own	R	38.4	4	D	139	3800	30x5P	30x5P
Relay Series 40	1½	2990	Bud D S 6	6	3⅝x5	31.5	Pb	Zen	Vac	Aut	Br-L	U	4	Own	R	34.5	4	D	168	5300	34x5	D34x5
Relay Series S 11	2	2030	Bud H S 6	6	3⅜x4½	27.3	Pb	Zen	Vac	Aut	Br-L	U	4	Own	R	30.0	4	D	162	4700	32x6	D32x6
Relay Series 50	2	3860	Bud D W 6	6	3¾x5	33.7	Pb	Zen	Vac	Aut	Br-L	U	5	Own	R	58.5	4	D	161	6800	36x6	D36x6
Relay Series 60	2½	4555	Bud B A 6	6	4 x5⅛	40.8	Pb	Zen	Vac	Aut	Ful	U	5	Own	R	63.7	4	D	175	7350	36x6	D36x6
Relay Series 80	3	5330	Bud B A 6	6	4⅛x5⅛	40.8	Pb	Zen	Vac	Aut	Br-L	U	8	Own	R	84.18	4	D	175	8400	36x6	S40x10
Relay Series 80	4	5380	Bud B A	6	4⅛x5⅛	40.8	Pb	Zen	Vac	Aut	Cov	C	8	Own	R	84.18	4	D	175	8800	38x7	S40x14
Relay Series 100	5	6615	Con 21 R	6	4⅜x4¾	45.9	Pb	Str	Vac	Aut	Ful	U	5	Own	R	63.7	4	D	230	10000	9.00x24	D9.75x24
Reo D F 129	½	1095	Own	6	3⅜x5	27.3	Pb	Sch	P	DR	Own	U	3	Own	Sp	17.1	4	Tr	129	—	6.00x20	32x6
Reo 15 Junior	½	785	Con 16 E	6	3⅜x4	27.3	Pb	Sch	P	DR	W-G	U	3	Sal	Sp	14.63	4	Tr	115	2290	6.00x18	6.00x18
Reo D F	1	1095	Own C B	6	3⅜x5	27.3	Pb	Sch	P	DR	Own	U	3	Own	Sp	17.1	4	Tr	135	3200	6.00x20	32x6
Reo F A	1½	1295	Own	6	3⅜x5	27.3	Pb	Sch	Vac	DR	Own	U	4	Own	Sp	22.96	4	Tr	135	3525	6.50x20	32x6
Reo F E	1½	1395	Own	6	3⅜x5	27.3	Pb	Sch	Vac	DR	Own	U	4	Own	Sp	22.96	4	Tr	152	3700	6.50x20	32x6
Reo F F	1½	1395	Own	6	3⅜x5	27.3	Pb	Sch	Vac	DR	Own	U	4	Own	Sp	22.96	4	Tr	156	3750	6.50x20	32x6
Reo F H	2	1595	Own	6	3⅜x5	27.3	Pb	Sch	Vac	DR	Own	U	4	Own	Sp	37.6	4	Tr	142	4165	32x6	32x6D
Reo F C	2	1645	Own	6	3⅜x5	27.3	Pb	Sch	Vac	DR	Own	U	4	Own	Sp	37.62	4	Tr	152	4025	32x6	32x6D
Reo F D	2	1745	Own	6	3⅜x5	27.3	Pb	Sch	Vac	DR	Own	U	4	Own	Sp	37.62	4	Tr	168	4075	32x6	32x6D
Reo G A	3	3035	Own	6	3⅜x5	27.3	Pb	Sch	Vac	DR	Own	U	4	Own	Sp	41.05	4	Tr	163	4625	32x6	32x6D
Reo G C	3	2140	Own	6	3⅜x5	27.3	Pb	Sch	Vac	DR	Own	U	4	Own	Sp	41.05	4	Tr	179	4850	32x6	32x6D
Reo G D	3	1985	Own	6	3⅜x5	27.3	Pb	Sch	Vac	DR	Own	U	4	Own	Sp	46.2	4	Tr	144	4570	32x6	32x6D
Reo G C S	3	2375	Own	6	3⅜x5	27.3	Pb	Sch	Vac	DR	Own	U	4	Own	Sp	41.05	4	Tr	210	5320	32x6	32x6D
Rugby T	½	655	Con	6	3¼x4	25.4	Pb	Str	P	Aut	Own	U	3	Own	Sp	15.6	4	4	—	2160	29x5	29x5
Rugby 6-15	1	865	Con	6	3¼x4	25.4	Pb	Str	P	Aut	Br-L	U	4	Sal	Sp	34.49	4	Tr	135	2900	20x5.50	32x6
Rugby 615	1½	930	Con	6	3¼x4	25.4	Pb	Str	P	Aut	Br-L	U	4	Sal	Sp	34.49	4	Tr	135	3000	5.50x20	30x5D
Selden 7 C	1	1098	Con	6	2⅜x4¾	19.84	Pb	Zen	Vac	Aut	Br-L	U	3	Tim	Sp	—	4	D	124	3600	30x5	30x5
Selden 17 C	1½	1500	Con	6	3⅜x4	27.3	Pb	Zen	Vac	Aut	Br-L	U	4	Tim	Sp	—	4	D	142	3700	32x6	32x6
Selden 317 C	1½	1610	Con	6	3⅜x4⅝	27.34	Pb	Str	Vac	Aut	Br-L	U	4	Tim	Sp	—	4	D	142	3900	32x6	32x6
Selden 37 C	2	1935	Con	6	3⅜x4⅝	27.34	Pb	Str	Vac	Aut	Br-L	U	4	Tim	Sp	—	4	D	151	4800	32x6	32x6D
Selden 39 C	2½	2920	Con	6	4 x4⅛	38.4	Pb	Str	Vac	Aut	Br-L	U	4	Tim	Sp	—	4	D	164	5800	32x6	32x6D
Selden 47 C B	3½	3785	Con	6	4 x4½	38.4	Pb	Str	Vac	Aut	Br-L	U	4	Tim	Sp	—	4	D	171	7200	34x7	34x7D
Selden 47 C D	4	4435	Con	6	4 x4½	38.4	Pb	Str	Vac	Aut	Br-L	U	5	Wis	2R	—	4	D	171	7600	36x8	36x8D
Selden 67 C	5	4975	Con	6	4⅜x4¾	45.94	Pb	Str	Vac	Aut	Br-L	C	7	Wis	2R	—	4	D	171	8700	36x8	36x8D
Selden 77	7	7365	Con	6	4⅝x5¾	54.15	Pb	Str	Vac	Aut	Br-L	C	7	Wis	2R	—	4	D	178	12000	36x7	40x7D
Service Series S 11	1	1600	Bud H S 6	6	3⅜x4½	27.3	Pb	Zen	Vac	Aut	Br-L	U	4	Col	Sp	25.5	4	D	142	3900	30x5	30x5
Service Series S 11	1½	1900	Bud H S 6	6	3⅜x4½	27.3	Pb	Zen	Vac	Aut	Br-L	U	4	Tim	Sp	29.2	4	D	162	4300	30x5	D30x5
Service Series 40	1½	2990	Bud D S 6	6	3⅝x5	31.5	Pb	Zen	Vac	Aut	Br-L	U	4	Tim	Wo	34.8	4	D	168	4700	34x5	D34x5
Service Series S 11	2	2030	Bud H S 6	6	3⅜x4½	27.3	Pb	Zen	Vac	Aut	Br-L	U	4	Tim	Sp	29.2	4	D	162	4500	32x6	D32x6
Service Series 40	2	3240	Bud D S 6	6	3⅝x5	31.5	Pb	Zen	Vac	Aut	Br-L	U	4	Tim	Wo	34.8	4	D	168	4900	36x6	D36x6
Service Series 40	2½	3240	Bud D S 6	6	3⅝x5	31.5	Pb	Zen	Vac	Aut	Br-L	U	4	Tim	Wo	34.8	4	D	168	5100	36x6	D36x6
Service Series 60	2½	4580	Bud B A 6	6	4⅛x5⅛	40.8	Pb	Zen	Vac	Aut	Ful	U	5	Tim	Wo	63.0	4	D	175	7000	36x6	36x6
Service Series 60	3	4680	Bud B A 6	6	4⅛x5⅛	40.8	Pb	Zen	Vac	Aut	Ful	U	5	Tim	Wo	63.0	4	D	175	7100	36x6	D38x7
Service Series 80	3½	5250	Bud B A 6	6	4⅛x5⅛	40.8	Pb	Zen	Vac	Aut	Br-L	C	7	Tim	Wo	98.2	4	D	175	8200	S36x6	S36x12
Service Series 80	4	5330	Bud B A 6	6	4⅛x5⅛	40.8	Pb	Zen	Vac	Aut	Br-L	C	7	Tim	Wo	98.2	4	D	175	8400	S36x6	S36x14
Service Series 100	5	5830	Bud B A 6	6	4⅛x5⅛	40.8	Pb	Zen	Vac	Aut	Br-L	C	7	Tim	Wo	95.0	4	D	175	9600	S36x6	S40x14
Stewart 30	1	695	Lyc AFE	4	3¾x4½	22.5	Pb	Str	Vac	DR	W-G	U	4	Sal	Sp	35.1	4	D	130	2905	6.50x20	6.50x20
Stewart 30 X	1	795	Lyc WRG	6	2⅞x4¾	19.8	Pb	Str	Vac	DR	W-G	U	4	Sal	Sp	35.1	4	D	130	2965	6.50x20	6.50x20
Stewart 40	1½	895	Lyc AFE	4	3¾x4½	22.5	P	Str	Vac	DR	W-G	U	4	Cla	Sp	35.1	4	D	130	3215	6.50x20	6.50x20D
Stewart 34 X	1½	1195	Lyc 4 SL	6	3¼x4½	25.3	Pb	Str	Vac	DR	W-G	U	4	Cla	Sp	35.1	4	D	145	3526	6.50x20	6.50x20
Stewart 28 X	1¾	1495	Lyc 4 SL	6	3¼x4½	25.3	Pb	Str	Vac	DR	Ful	U	4	Cla	Sp	44.1	4	D	136	3840	6.50x20	6.50x20
Stewart 29 XS	2	1695	Lyc ASA	6	3⅝x4½	25.3	Pb	Str	P	DR	Ful	U	4	Cla	Sp	44.1	4	D	145	4188	32x6	32x6D
Stewart 26 XW	2	2290	Lyc TF	6	3⅝x5	31.5	Pw	Str	Vac	DR	Ful	U	4	Tim	Wo	48.1	4	D	165	5095	32x6	32x6D
*Stewart 18 X	2½	2690	Lyc TF	6	3⅝x5	31.5	Pw	Str	Vac	DR	Ful	U	4	Tim	Wo	48.1	4	D	165	5788	32x6	32x6D
Stewart 32 X	2½	1990	Lyc ASA	6	3⅝x4½	31.54	Pw	Str	Vac	DR	Ful	U	4	Cla	Sp	46.1	4	D	165	5100	32x6	32x6D
Stewart 33 X	3	3290	Lyc TS	6	3⅞x5	36.2	Pw	Str	Vac	DR	Ful	U	4	Tim	Wo	105.1	4	D	165	6450	34x7	34x7D
Stewart 19 X	3½	3690	Lyc TS	6	3⅞x5	36.2	Pw	Str	Vac	DR	Ful	C	12	Tim	Wo	105.1	4	D	165	6990	36x5	36x10
Stewart 31 X	5	4990	Wak 6 RSL	6	4⅝x5⅛	45.9	Pw	Str	Vac	DR	Ful	C	8	Tim	Wo	82.1	4	D	165	8400	36x6S	36x6SD
Stewart 27 X	6-7	5700	Wak 6 RSL	6	4⅝x5⅛	45.99	Pw	Str	Vac	DR	Ful	U	8	Tim	Wo	93.81	4	D	165	9927	36x7	40x7D
Studebaker GN-P	¾	845	Own	6	3⅜x4⅛	27.3	Pb	Str	P	DR	Own	U	3	Own	Sp	15.15	4	‡4	115	2465	6.00x19	6.00x19
Studebaker GN-S	1	1045	Own	6	3⅜x4⅛	27.3	Pb	Str	P	DR	Own	U	3	Own	Sp	13.8	4	D	130	2990	6.00x20	30x5
Studebaker GK-N	1	1095	Own	6	3⅜x4⅝	27.3	Pb	Str	P	DR	Own	U	3	Own	Sp	13.8	4	D	146	3000	30x5	30x5
Studebaker S-20	1½	695	Own	6	3¼x4⅛	25.4	Pb	Str	P	DR	W-G	U	4	Tim	Sp	36.2	4	4	130	3000	6x20	32x6
Studebaker S-30	1½	775	Own	6	3¼x4⅛	25.4	Pb	Str	P	DR	W-G	U	4	Tim	Sp	36.2	4	4	160		6x20	32x6
Studebaker S-50	2	895	Own	6	3¼x4⅛	25.4	Pb	Str	P	DR	W-G	U	4	Tim	Sp	37.4	4	4	148		6.50x20	6.50x20D
Studebaker S-60	2	945	Own	6	3¼x4⅛	25.4	Pb	Str	P	DR	W-G	U	4	Tim	Sp	37.4	4	4	160		6.50x20	6.50x20D
Studebaker GN-N	*4000	1245	Own	6	3⅜x4⅛	27.3	Pb	Str	P	DR	Cla	U	4	Cla	Sp	33.5	4	D	146	3265	30x5	32x6
Studebaker 77	*12500	2895	Own	8	3½x4⅜	39.2	Pb	Str	P	DR	Ful	U	4	Eat	Sp	24.6	4V	D	158	5030	7.00x20	7.00x20D
Studebaker 88	*12500	3295	Own	8	3½x4⅜	39.2	Pb	Str	P	DR	Ful	U	4	Eat	Sp	24.6	4V	D	184	5200	7.50x20	7.50x20D
Studebaker 99	*14000	3795	Own	8	3½x4⅜	39.2	Pb	Str	P	DR	Ful	U	4	Eat	Sp	24.6	4V	D	184	5680	7.50x20	7.50x20D
Whippet 96 A	½	360	Own 96 A	4	3⅛x4¾	15.6	Pb	Til	Vac	Aut	Own	U	3	Own	Sp	14.74	4	R	103¼	1691	4.75x19	4.75x19
White 15 B		1545	Own GKA	4	3¾x5⅛	22.5	CS	Zen	Vac	L-N	Own	C	4	Own	Sp	18.6	R	R	133½	3402	30x5	30x7
White 60		1850	Own 2 A	6	3½x4½	29.4	Pw	Zen	Vac	DR	Own	U	3	Own	Sp	17.9	4	D	138	3739	30x5	30x5
White 57		2725	Own GRC	4	4 x5¾	25.6	Pw	Zen	Vac	L-N	Own	U	4	Own	Sp	19.3	R	R	146	3935	32x6	32x6
White 20 A		2125	Own GKA	4	3¾x5⅛	22.5	CS	Zen	Vac	L-N	Own	C	4	Own	2R	32.1	R	R	145½	4572	34x5	34x5D
White 61		2450	Own 4 A	6	3¾x4½	33.75	Pw	Zen	Vac	DR	Own	U	4	Own	Sp	23.4	4	D	148	4789	30x5	30x5D
White 56		3125	Own GRC	4	4 x5¾	25.6	Pw	Zen	Vac	Mag	Own	U	4	Own	Sp	26.2	R	D	165	5276	36x4S	36x7S
White 51 A		3750	Own GRB	4	4¼x5¾	28.9	Pw	Zen	Vac	Mag	Own	U	4	Own	Sp	35.6	R	D	170	6438	36x5S	36x9S
White 58		4400	Own GRB	4	4¼x5¾	28.9	Pw	Zen	Vac	Mag	Own	U	4	Own	IG	49.7	D	R	170	6438	36x5S	36x8S
White 55		4650	Own GRB	4	4¼x5¾	28.9	Pw	Zen	Vac	Mag	Own	U	4	Own	IG	66.1	D	R	174	8737	36x5S	40x5SD
White 52 T		4700	Own GRB	4	4¼x5¾	28.9	Pw	Zen	Vac	Mag	Own	U	4	Own	IG	76.5	D	R	129½	8461	36x5S	40x5SD
White 52		5100	Own GRB	4	4¼x5¾	28.9	Pw	Zen	Vac	Mag	Own	U	5	Own	IG	92.3	D	R	174	9409	36x6S	40x12S
White 59 A		6000	Own 3 A	6	4 x5¼	38.4	Pw	Zen	P	DR	Own	U	4	Own	Sp	66.5	D	R	155	9775	40x8	40x14S
White 63		5000	Own 3 A	6	4 x5¼	38.4	Pw	Zen	P	DR	Own	U	4	Own	Sp	41.4	4	D	168	8350	34x7P	34x7DP
White 64		6300	Own 1 A	6	4⅜x5¾	45.94	Pw	Zen	P	LN	Own	U	4	Own	2R	46.8	4	D	180	9154	36x8P	36x8DP
Willys Six 98 B	½	525	Own 98 B	6	3¼x3⅞	25.35	Pb	Til	Vac	Aut	Own	U	3	Own	Sp	14.28	4	B	110	1903	5.00x19	5.00x19
Willys Six C-101	1½	695	Own 98 B	6	3¼x3⅞	25.35	Pb	Til	Vac	Aut	Cov	U	4	Cla	Sp	36.12	4	B	131	2675	5.50x20	30x5
Willys-Knight T-103	1½	825	Own KGT	6	2⅞x4⅝	20.7	Pb	Til	Vac	Aut	Cov	U	4	Cla	Sp	42.33	4	B	131	2808	5.50x20	30x5

GENERAL NOTATIONS

*†REFERENCE MARKS apply to individual lines only and explanations are given under the subdivision for each company in the "SPECIAL NOTATIONS."

CAPACITIES given in this table are in tons or fractions of tons. *Shows maximum allowable gross weight in pounds.

WHEEL BASES given are standard, but optional wheel bases are available in many cases

ENGINE—Bud Buda; Con., Continental; Her, Hercules; Kgt, Knight; Lyc, Lycoming; Wak Waukesha; Wis, Wisconsin. Hall, American Car & Foundry.

LUBRICATION—Pb, pressure lubrication to main and connecting rod bearings; Pw, full pressure lubrication to all main, connecting rod and camshaft bearings, including wrist-pins; CS, circulating splash; Sp, Splash.

CARBURETOR—Car, Carter; Mar, Marvel; Sch, Wheeler-Schebler; Str, Stromberg; DL, Detroit Lubricator; Til, Tillotson; Zen, Zenith-Detroit.

FUEL FEED—Gra, Gravity; Vac, Vacuum tank; P, Fuel pump.

IGNITION — AB, American-Bosch; Aut, Electric Auto-Lite; Eis, Eisemann; L-N, Loece-Neville; N-E, North East; RB, Robert Bosch; D R, Delco-Remy; Mag, Magneto.

TRANSMISSION—Br, L, Brown-Lipe; Cov Covert; Ful, Fuller; Mec, Mechanics Machine; Mun, Muncie; W-G, Warner Gear; Cotta, Cotta Gear Co.

LOCATION—C, Center, amid; U, in unit with engine; J, on jackshaft.

REAR AXLE—Cla, Clark Equipment; Col, Columbia; Eat, Eaton; Sal, Salisbury; Tim, Timken. Wis, Wisconsin.

FINAL DRIVE—IG, Internal gear; St, Straight bevel; Sp, Spiral bevel; Wo, Worm; 2R, Double reduction; Ch, Chain; R, Relay drive.

BRAKES—J, Jack shaft; R, Rear wheels; D, Drive shaft; 4, four-wheel; Tr, Transmission; V, Vacuum booster; W, Westinghouse air brake. B, Both front and rear wheels.

TIRES—B, Balloon; D, Dual; S, Solid; P, Pneumatic.

SPECIAL NOTATIONS

AMERICAN-LA FRANCE

*Chief model also available as 2½-ton model, 34x7 tire, dual rear, weight 6,400. Price $3,900.

Chieftain mode also available as Dump Truck, 160-inch wheel base.

Balloon tires optional on Chief, Chieftain and Big Chief models.

AUSTIN

*Price includes body.

AUTOCAR

*Engines in these models are located under the driver's seat.

DAY-ELDER

Models CF and HF also available in 186-inch wheel base.

Model JF also available in the following wheel bases: 165, 180 and 204 inches.

Model KF also available in 202-inch wheel base and tractor 149.

DURANT LINE

*Price includes panel body.

F. W. D.

*Indicates six-wheel model. Special power take-off transmission, which provides 3 power take offs which may be operated in any transmission speed, optional on all models.

*Foot brake on X6 is a lockheed type operating on all six wheels.

FEDERAL

*Six wheelers.

GRAMM

*Models L, C, D and E are furnished in three wheel base lengths—others on request.

*Models GY and GYB also available in 190-inch wheel base.

*Models HY and HYB also available in 210-inch wheel base.

Tire sizes and electrical equipment optional, depending upon type of service —coach or van.

*Model O Series, Large engine, pneumatic tires, special wheel bases optional at extra cost

*Model T Series, Large engine, pneumatic tires, special wheel bases and 8 speed transmission optional at extra cost.

GENERAL MOTORS TRUCK LINE

*Capacity indicated for each chassis is the recommended gross weight without exceeding ratec capacity of tires. The tire size does not affect the straight rating for which chassis is guaranteed and each model is designed to operate satisfactorily under average conditions with loads giving a total gross weight (chassis, body, equipment and payload) equal to straight rating given below. The additional standard wheel base lengths, the number of additional tire types (tire combinations—each type carrying a recommended gross weight) and the ton range on a nominal payload basis for each model is given below

Model	Straight Rating	Additional Wh Bases, ins.	Tire Types	Payl'd Range
T-11	3800	None	None	½
T-15	5400	141	2	¾
T-17	6500	141	8	¾-1¼
T-19	8500	141, 152	16	1-2
T-25	8500	141, 152	11	1-1¾
T-30	11000	152, 164	12	1½-2½
T-42	14000	152, 164, 181	10	2-3½
T-44	15000	152, 164, 181	10	2-4
T-60	18500	166¾, 184½, 200¼	16	2½-4½
T-82	22000	167½, 185¼, 201	10	3-6
T-93	28000	201, 220	5	5-7½

Optional rear axle ratios are available for all models.

MACK LINE

Other wheel bases furnished on all truck models.

On 6-wheel jobs, 4 rear wheels driven by chains, foot brake on 4 rear wheels.

HYP.—Hypoid drive, single reduction.

††Made also in tractor models.

REO LINE

Model F A also available in 129-inch wheel base.

RUGBY

F—Chassis weight includes body.

STEWART LINE

Model 30 and 30X can also be supplied in 120 and 140-inch wheel base.

Model 40 can also be supplied in 140 and 160-inch wheel base.

*Model 34X can be supplied in 145, 160 and 176-inch wheel base.

Model 28X can be supplied in 145, 160 and 176-inch wheel base.

Model 29XS can be supplied in 160 and 176-inch wheel base.

*Model 26XW can be supplied in 148, 176 and 190-inch wheel base.

*Models 18X, 32X and 33X can be supplied in 148, 190 and 220-inch wheel base.

*Models 19X, 31X and 27X can be supplied in 148, 172, 190, 220 and 235-inch wheel base.

As optional equipment models 18X, 19X, 33X, 31X and 27X can be supplied with Timken dual reduction rear axle.

STUDEBAKER LINE

*Capacity Model GN-N is 4,000 lbs. for body, cab, driver and payload.

Maximum gross load, chassis, body and payload for Models 77 and 88 is 12,500 lbs and for Model 99 is 14,000 lbs.

‡Hand brake same as foot brake, standard. Hand brake on drive shaft, special equipment.

Production--Engineering--Factory

Wingless Aircraft Using Rotor Principle Tested

A wingless aircraft, an aeronautical adaptation of the Flettner rotor ship, is being secretly developed on Long Island Sound, off Mamaroneck, says the New York Times.

Aside from the elimination of the wing, it is similar in appearance to a seaplane. A single motor in the nose supplies traction through a three-bladed steel propeller. An auxiliary air-cooled Gypsy motor supplies power to rotate the cylinders which replace the wings.

These rotors, the central mechanism of the new theory of flight, are in four sections, two on each side of the center longitudinal line of the craft. Forward is an outrigged rudder and behind is a small pair of tandem cockpits, together with a set of tail surfaces similar to those now in use on planes. Between the motor and the cockpits two long booms are used in place of the usual four longerons. The undercarriage, or landing gear, is of the usual design, and on the present model Edo floats are used. At the Edo Aircraft Corporation, College Point, L. I., it was learned that two pairs had been supplied and that one was badly smashed in a rough landing, indicating that the machine had risen considerably from the water on one of its flights.

Two-Foot Rotor Cylinders

The individual rotors are closed at the ends by flanges which are much larger than the cylinders. The diameter of the cylinders is more than two feet, while the flanges are about four. The total span of the rotors is somewhat less than the wing span of conventional planes, thus requiring less storage space.

It has been declared that the machine will lift nearly ten times the load of an airplane of equal weight or lift area, and at the same time reduce the resistance so that greater speed will be possible when structural details for strength have been carried out.

When Anton Flettner crossed the Atlantic in 1924 in his rotorship Baden-Baden with no other power than that supplied by the wind against his two tall whirling stacks, aeronautical designers predicted that the principle would be made applicable to aircraft. With simple formulae they arrived at conclusions showing pressures in many thousands of pounds at speeds lower than 500 revolutions a minute on the rotors.

Even before the rotorship was developed the Wright brothers showed considerable interest in whirling cylinders to obtain lifting power. When in Paris in conference with officials of the French government, shortly after they had flown for the first time, they played the game of diabolo with children in the gardens. They became so proficient at whirling the small spools on strings the aviation pioneers were able to maneuver the spools more than 100 feet in the air. After sailing a whirling cylinder for a time the two brothers made notes and conferred with each other. Their conclusions have not become known.

The principle involved is one of changing the direction of air pressures and currents. It is built around the phenomenon that a whirling cylinder in an air stream sets up a high vacuum perpendicular to the direction of the current of air. A slight pressure is also present on the opposite side of the cylinder. In the ship the current was supplied by the wind.

Principle of Operation

In the airplane, however, it was pointed out that the wind currents are higher and more constant when supplied by the resistance to the fast motion forward and augmented by the slipstream of the propeller. With regard to these forces inventors assert that the resultant force, diverted from one of locomotion to one of lift, becomes greater in multiples of the velocity, a progression which soon becomes powerful as the speed increases. The methods of control and details of construction are still in the early stages of experiment, and the present model is constructed along lines similar to conventional types, it was said, only because no better or more logical method has yet been evolved.

If several more test flights are successful, it is planned to demonstrate the new aircraft publicly within the next few weeks, it was learned yesterday, when the present method of control will be used, while further experiments will be conducted with other systems for regulating the direction and speed of flight.

Roller Chain Standard Approved by S. A. E.

What was probably the first step toward the standardization of roller chains was a data sheet printed by the Society of Automotive Engineers in 1913 giving formulas for calculating the lengths of roller chains based on a series of chain pitches, roller diameters and widths, and sprocket-tooth outlines. These data were primarily for roller chains to be used in motor-vehicle drives.

About four years later, however, further standardization of roller chains was taken up jointly by the Society of Automotive Engineers and the American Society of Mechanical Engineers and continued until 1920. In 1921 specifications were also adopted for roller-chain sprockets and sprocket cutters.

In 1924 the sectional committee on transmission chains, sprockets and cutters was organized under the the procedure of the American Engineering standards committee, now the American Standards Association, and sponsored by the Society of Automotive Engineers, the American Society of Mechanical Engineers and the American Gear Manufacturers Association. This committee has completed its report after several years of careful investigation and study.

The report includes nomenclature for roller-chain parts and dimensions for standard and extra-heavy series of chains. The standard for these chains has been worked out mathematically in accordance with formulae given in the report and on the basis of the experience of the chain manufacturing industry. Valuable data governing the design of standard sprocket teeth and the cutters for them are also included. The new American Standard, which includes only the chains, sprockets and cutters, is supplemented by formulae and tables for working loads and horse powers for the standard chains, as well as pitch diameters and outside diameters of sprockets and information relating to patterns for cast sprockets.

This report has been approved by by the Society of Automtive Engineers as a sponsor for the Sectional Committee and its project, and adoption of the standard will, in effect, supersede the present S. A. E. standard for roller chains.

New Engine Tested In Georgia

Atlanta, Ga., Aug. 21.—Major W. H. Seabrook of the Birmingham & Coast Railroad is testing a new type engine, which he invented, at the Georgia School of Technology.

He claims a 10 per cent. power gain with 8 per cent. less fuel consumption, due largely to the use of positive cam valve action instead of the usual spring closing mechanism.

Seek to Standardize Fuel Anti-Knock Tests

The standards committee of the Society of Automotive Engineers has been working, in conjunction with other organizations, in an effort to standardize on anti-knock tests in gasoline research. This has been necessary because both users and consumers of gasoline have been dissatisfied with the present system of testing fuel knocks, which have made it impossible to compare results obtained in different laboratories using a diversity of apparatus, methods and reference standards.

During 1927 the problem was discussed at meetings of the co-operative fuel research steering committee, which is a joint committee of the American Petroleum Institute, the National Automobile Chamber of Commerce and the Society of Automotive Engineers.

In February, 1928, a subcommittee was appointed to develop apparatus for a method of rating knock and a standard reference fuel or a scale of fuels that would make knock-testing results comparable and that would be generally used as standard.

The members of the subcommittee were in agreement on the main details of the program and that the first step to be taken was to develop a suitable engine for knock testing, so that all experimental work on methods of rating fuel for knock would be on a common basis. During the last year the laboratories represented by the committee have concentrated on perfecting a test engine and studying the effects of engine variables on the knock ratings of a series of test fuels. Determinations are in progress on a group of methods representative of those now commonly used, for the purpose of deciding upon a standard procedure. To make more rapid progress in the preliminary work and to have at least a temporary standard basis for testing, the detonation subcommittee, at a recent meeting, unanimously adopted the following resolution embodying its views:

That the detonation subcommittee makes more definite its announced intention to refer knock testing results back to heptane-octane by using a scale of octane numbers, the octane numbers to be the number of parts of octane by volume added to ten parts by volume of normal heptane; and proposes to the co-operative fuel research steering committee that the companies represented on the steering committee be invited to follow the example of this committee and to interpret their methods of rating fuels in the same language, recognizing that such ratings will be somewhat approximate for the present until standard methods of test have been generally agreed upon; and recommends to the S. A. E. research committee that this method of specifying anti-knock fuels be approved as a standard practice.

The resolution of the subcommittee was approved by the research committee and referred to the standards committee with the request that the latter proceed in the regular way toward adoption of the detonation subcommittee's resolution as S. A. E. recommended practice. The council has been requested to assign the subject to the lubricants division of the standards

(Continued on Page 11)

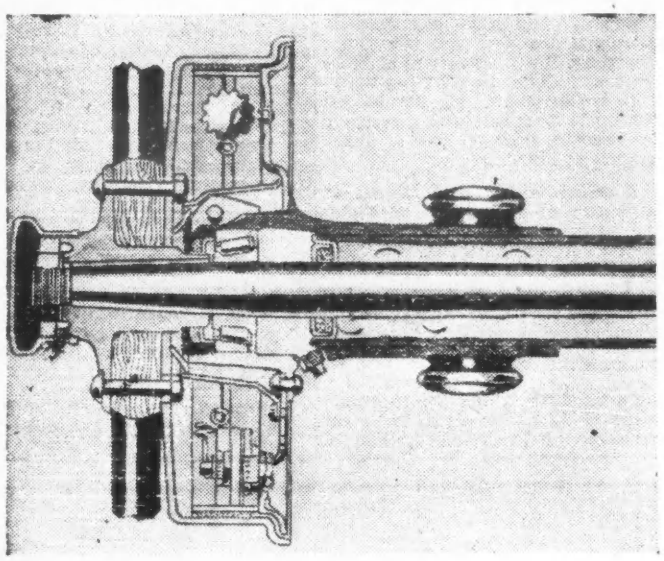
CUMULATIVE NEW PASSENGER CAR

Figures in this table are from R. L. Polk & Co. of Detroit, with the exception of Illinois, which are supplied by the Robinson Advertising
desiring county, city or town lists, or lists of owners in any given
Some of this data has been published previously, but it is

Returns for today:

	Auburn	Austin	Black Hawk	Buick	Cadillac	Chevrolet	Chrysler	Cord	DeSoto	Dodge	Durant	Essex	Ford	Franklin	Gardner	Graham	Hudson	Hupmobile	Jordan	La Salle	Lincoln
Arkansas	5	4		49	5	1337	95	1	29	105	26	31	1912	3		24	6	8		11	2
Delaware	2	2		33	5	152	23		6	4	13	12	293			1	6	10		1	
Florida	11	16		48	6	655	59	2	19	34	3	49	1108	6		44	22	20		8	2
Idaho	1	8		26		221	20		16	19	19	11	371	1		16	6	4			
Illinois	75	34	3	562	72	3495	411	41	269	346	103	242	7270	50	19	175	153	280	6	66	27
Maryland	4	12		123	21	868	79	2	19	36	15	46	1375	8		40	23	39		12	4
Minn.	16	33		140	14	1777	158		47	105	46	102	2772	4	2	93	53	79		26	11
Missouri	11	35		133	8	1242	91	2	47	125	22	95	1769	8	7	67	29	35		22	15
Montana	5			21	3	322	34		21	33	26	28	426	2		14	15	12		2	1
N. Hamp.	10			40	4	221	28		14	21	11	29	473			17	16	7	1	2	1
N. Dakota	1	2		12		352	17		10	19	13	6	497			12	4	1			
Rh. Island	7	1		91	9	306	71	1	69	36	8	34	722	6	2	22	21	21		12	2
S. Ca'lina		4		28		524	36		23	18	3	18	895	3		9	7	9		2	
S. Dakota	1	3		14		643	29		13	58	40	20	897			14	17	13		2	
Utah	5	10		33	3	224	11	3	16	20	21	25	430	5		16	10	2		2	
W. Va.	9	9		59	7	809	81	1	38	109	25	83	1298	2	1	71	26	23		5	2
Wisconsin	18	24		290	24	1781	165	2	109	142	85	144	2794	12		91	81	52	1	9	5
Dis. of Col.	2	18		106	9	396	47		19	29	13	25	1130	6		31	11	30	1	8	5
Total	183	215	3	1808	190	15325	1455	55	784	1264	492	1000	26432	116	31	757	506	645	9	190	77
Ark., '29	3			122	8	1522	98		83	159	49	92	2796	6		39	22	15		11	7
Dela., '29	10			50	6	190	9		2	7	40	52	351	2		4	14	4		11	
Fla., '29	10			150	10	955	80		47	83	7	145	1801	13		84	71	40	7	24	4
Idaho, '29	1			64	1	379	22		23	49	94	66	526	2		22	20	1		1	
Ill., '29	256		16	1101	119	5116	655		504	893	261	1323	9072	56	18	553	560	397	12	209	72
Md., '29	14		2	194	11	1152	108		35	103	54	240	1577	14	1	81	69	49	3	16	14
Minn., '29	29		2	264	4	1900	151		78	188	160	388	4611	4	3	161	125	81	5	26	6
Mo., '29	34		1	283	20	1534	133		91	174	145	348	2582	19	14	96	90	93	5	33	11
Mont., '29	10			46	3	320	35		28	56	45	86	527	7		24	34	11		5	
N. H.,'29	6			64		305	46		38	47	39	80	472	14		22	25	17	2	7	1
N. D., '29	3			50	1	468	28		32	45	39	62	968	1		28	12	5			1
R. Isle., '29	23			102	16	432	105		67	67	23	147	579	22	2	71	45	37		31	5
S. C., '29			1	80	3	948	50		53	30	4	60	1677	5		7	32	9		8	1
S. D., '29	12			89	1	901	52		25	106	121	111	1540			38	18	35		1	
Utah, '29			1	79	3	487	26		27	66	90	102	709	2		47	26	24		2	
W. Va., '29	8		3	137	6	1142	123		81	231	49	242	1655	4		123	54	36	4	13	10
Wis., '29	38		3	585	10	2681	254		222	318	178	682	4544	33	10	231	283	97	3	16	10
D. of C., '29	11			146	6	418	55		28	24	8	120	965	10	1	56	34	36	3	15	2
Total, '29	468	*	29	3606	228	20850	2030	*	1474	2646	1406	4346	36952	214	49	1687	1534	987	44	429	144

Announces New Improved Line of Whippet Fours



FULLY INCLOSED, internal four-wheel brakes used on the Improved Whippet

(Continued from Page 1)

the engine are unchanged, being 3⅛ inch by 3¾ inch. It is rated at 15.6 horse power. The displacement is 145.7 cubic inches.

Other specifications of this car which remain unchanged include pressure feed lubrication, pump circulation in cooling system, Tillotson carburetor, Morse silent chain, Auto-Lite starting and ignition, Borg & Beck clutch, Mechanics universals, Tryon shackels and Alemite chassis lubrication.

FORD DEALER HONORED

San Francisco, Aug. 21 (UTPS).—To fill the position left vacant by the death of A. D. Plughoff a few days ago, William L. Hughson, one of the oldest Ford distributors in San Francisco, has been elected treasurer of the San Francisco Motor Car Dealers' Association. Allan Greer, general manager of Greer-Robbins, Hupmobile distributor here, and J. J. Davis of the General Motors Truck Company, were both named to the executive committee of the association.

HENRY FORD ACQUIRES OLD RENAULT FOR MUSEUM

New York, Aug. 21.—Marcel Guillermon and Andre de la Paule, executives of the Renault Automobile Company of Paris, sailed for home yesterday on the French liner France after a business trip here.

U. S. GASOLINE STOCKS ARE REDUCED 1,477,000 BARRELS IN ONE WEEK

New York, Aug. 21.—Gasoline stocks in all parts of the country were reduced further by withdrawals of 1,477,000 barrels during the week ended August 16, it was reported by the American Petroleum Institute.

At the end of the week gasoline stocks totaled 41,252,000 barrels, compared with 42,729,000 barrels of the previous week.

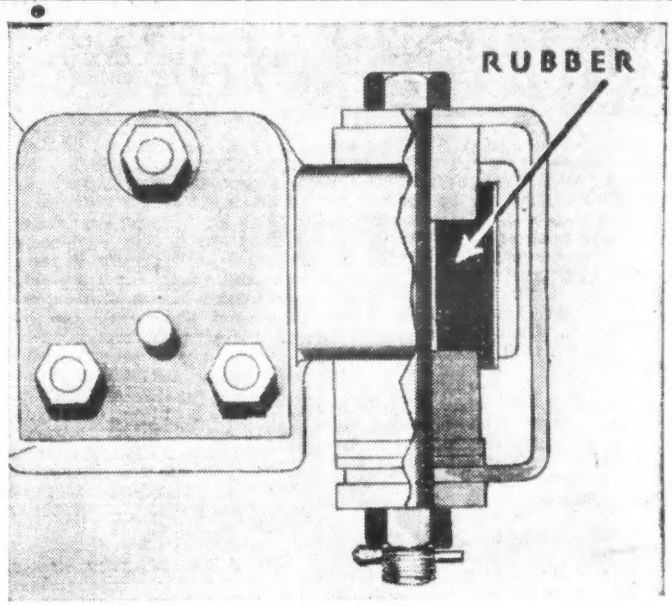
The strict adherence by Oklahoma oil operators to curtail agreements is one of the outstanding reasons assigned for the decrease in stocks. The association in its report indicated a fresh cut in the daily average crude oil production of 16,800 barrels.

Oklahoma contributed the largest decline with 22,550 barrels. The daily average for the Mid-continent field, which includes Oklahoma, Kansas, Texas, north Louisiana and Arkansas, was 1,403,500, compared with 1,420,000 for the previous week.

The proration committee of the Midcontinent Oil and Gas Association has voted to keep Oklahoma's output of crude oil at 550,000 barrels a day during September. A general meeting of operators called for August 22 will be asked to ratify that proposal.

Operators in Eastern fields, including independent producers in Venango, Crawford, Clarion, Mercer and Forest counties of Pennsylvania have agreed to curtail production 30 per cent. until September 1. That agreement conforms with curtailment in the Bradford and Alleghany county fields of the same state. It is expected that the curtailment will eventually be extended until October 1.

CLASSIFIED ADVERTISEMENTS IN THE AUTOMOTIVE DAILY NEWS BRING RESULTS



AT EACH POINT of contact with the frame, the engine in the Improved Whippet is set in rubber to absorb vibration

SEEK STANDARD ANTI-KNOCK TESTS

(Continued from page 10)

committee, and it has been referred to the division for action by letter ballot. The proposal was also sent to the principal engine builders and to automobile companies that make engines, with a request for their comments. Replies from a small majority of the division members had been received by July 10, nearly all of them approving the proposal in general and in some instances suggesting slight modifications in wording. The proposal being considered by the lubricants division is

S. A. E. Anti-Knock Numbers
(Proposed for S. A. E. Recommended Practice)

The anti-knock value of fuels shall be specified by referring detonation-test results back to heptane-octane, using a scale of octane numbers; these octane numbers to be the number of parts by volume of octane added to ten parts by volume of normal heptane.

Note—This recommendation is made, recognizing that such ratings will be somewhat approximate for the present and until standard methods of test have been generally agreed upon.

As soon as the division has recorded a more complete vote on the proposal, it will be prepared in the form approved for submission to the standards committee and society at the annual meeting next January for adoption as S. A. E. recommended practice. In the meantime the detonation subcommittee will proceed with its tests on the basis of the recommendation as approved by the lubricants division. Further information regarding the project can be obtained from the research department of the society.

REGISTRATION STATISTICS, JULY, 1930

Service, Springfield, Ill., and New Jersey, which are furnished by the New Jersey Motor List Co., New Car Division, Trenton, N. J. Readers section, may obtain these by addressing any of these three companies

given here complete for the convenience of our subscribers

Idaho and Missouri

	Marmon	Nash	Oakland	Oldsmobile	Packard	Peerless	Pierce-Arrow	Plymouth	Pontiac	Reo	Studebaker	Stutz	Viking	Whippet	Willys	Willys-Knight	Windsor	Miscellaneous	Totals
Arkansas	7	31	10	27	4		2	115	50	3	11		1	8	11	3		1	3,937
Delaware	3	2	1	8	7		2	9	23		11			1	6	3			639
Florida	11	24	20	14	23		4	37	36	9	25		2	9	23	6			2,355
Idaho	1	17	2	8	1			31	14	1	16			11	8	4			853
Illinois	73	411	134	359	273	27	30	453	418	59	519		14	69	201	100	25	19	16,883
Maryland	7	55	12	62	42	2	6	122	72	9	80		2	18	32	7	15		3,269
Minn.	18	90	50	106	99	1	6	350	165	17	137		4	85	149	34	1		6,790
Missouri	15	93	23	104	65	1	13	170	92	15	107			37	53	11	9	1	4,577
Montana	14	37	12	24	4			60	31	10	29		3	13	29	14			1,250
N. Hamp.	7	45	9	27	11	2	1	27	29	10	36		1	3	20	8			1,131
N. Dakota	7	15	6	20	6			48	27	1	21		2	18	18	5			1,140
Rh. Island	4	35	11	19	32	6	12	48	46	13	35	1		4	18	16		1	1,742
S. Ca'lina	3	14	5	10	6		1	47	22	2	10			2	1				1,702
S. Dakota	7	24	15	70	8		2	97	30	7	37		4	34	39	3			2,141
Utah	2	30	9	9	14		1	11	16	1	16		3	2	4				954
W. Va.	14	69	43	40	28		3	144	79	7	56	1	3	43	71	20			3,279
Wisconsin	22	216	76	150	55	11	9	341	231	15	163	1	11	58	163	29	1	4	7,385
Dis. of Col.	11	32	23	58	37	9	3	48	48	7	45		5	3	7	12		1	2,235
Total	226	1240	461	1115	715	59	95	2158	1429	186	1354	3	55	418	858	275	51	27	62,262
Ark., '29	17	73	21	42	4		3	170	167	13	43		2	165		21	1		5,774
Dela., '29	2	30	12	17	6	2	1	23	65	2	23		1	21		7			964
Fla., '29	12	73	32	46	22	3	6	55	121	22	41	2	3	133		23		11	4,136
Idaho, '29	7	23	8	19	4		1	48	50	3	27		2	58		11			1,532
Ill., '29	194	1135	265	883	291	81	50	813	1651	152	859	22	109	1033		224	22	806	29,833
Md., '29	24	97	32	96	24	5	10	124	269	13	92	3	8	168		43		2	4,747
Minn., '29	32	186	72	234	72	7	12	437	521	22	199	3	13	616		143	2	14	10,771
Mo., '29	53	194	41	219	60	16	28	188	235	24	138	3	3	528		61	11	11	7,519
Mont., '29	20	39	10	22	6	1	1	89	64	5	34		4	99		19		1	1,651
N. H., '29	18	59	13	43	11	2		46	63	11	36		2	60		15		7	1,571
N. D., '29	21	52	8	49	7		1	77	83	1	39	2	3	158		25		6	2,275
R. Isle., '29	22	83	9	66	33	11	14	67	121	32	51	1	5	62		39		18	2,408
S. C., '29	6	23	12	38	5			62	96	3	24		2	59		1			3,309
S. D., '29	25	81	22	130	6	1	1	149	138	8	68		7	271		32		1	3,990
Utah, '29	6	44	11	44	6		1	42	61	3	33	2	3	56		11			2,014
W. Va., '29	39	117	32	107	29	2	3	133	180	19	79	2	8	257		45			4,973
Wis., '29	87	493	130	444	58	16	34	494	707	36	339	2	12	695		121	1	35	13,902
D. of C., '29	34	64	22	105	33	8	13	37	117	15	69	3	14	39		11		14	2,536
Total, '29	619	2866	752	2604	677	155	179	3054	4709	384	2194	45	201	4528	*	852	37	926	103,905

*Not in production at that time. Marquette is now included with Buick.

Service Notes

Auburn, Wash., Aug. 21.—J. W. Meade of this city has purchased the garage business here formerly operated by R. W. Horn. The business will be operated as Meade's Garage and Transfer. Meade plans extensive improvements to the building in which the business is housed. Horn has been appointed sales manager of the Auburn branch of the Eldredge Buick Company.

Madison, Wis., Aug. 21.—The new Edwards Service Station, owned and operated by H. G. Edwards, president of the Capital City Tire Company, was opened this week. The new station features a 24-hour service on tire repairing, car washing, high pressure alemiting, battery work, wheel aligning and regular gas and oil services.

Aberdeen, Wash., Aug. 21.—The Washington Garage Company, Inc., has purchased the Dorn Reid Tire Shop here and assumes distribution in the Grays Harbor territory for Goodyear tires and products.

Toledo, O., Aug. 21.—Goodyear Tire and Rubber Company will start work immediately on a $300,000 two and three story brick building at the intersection of Madison Avenue and 10th Street, here. The building will be occupied by the Wayne Tire Company, Goodyear dealer. Upon completion of the building the Wayne company will feature complete automobile service, including gasoline, oil, brake linings, washing, greasing, repairs and accessories, in addition to a complete tire line.

Buffalo, N. Y., Aug. 21.—Fully equipped with the latest machinery and equipment, the Speedy Auto Wash has been established as a partnership by William T. Huntsman, 639 Elmwood Ave., Niagara Falls, N. Y.

Dealer Activities

Newark, N. J., Aug. 21.—Lawrence Motor Car Company, distributor for Auburn and Cord, announces the recent appointment by its wholesale manager, J. A. De Ronde, of four new dealers: Lackawanna Motor Sales Company, 397 Broad St., Newark; Court House Garage, Inc., 4 Atno Ave., Morristown; Irvington Auburn-Cord Company, 1215 Springfield Ave., Irvington, and Wilcox Motors, Inc., 19 Greenwood Ave., Montclair.

Ellensburg, Wash., Aug. 21.—George Mead, who operates the Mead Garage here, has been appointed distributor of the American Austin automobile in the Ellensburg territory.

Toledo, O., Aug. 21.—Harry Rosen and Harry P. Consaul have opened a new Hudson-Essex salesroom in Homeville Circle at Eastway Boulevard, West Toledo. The dealership, recently appointed, will operate under the name of West Toledo Hudson-Essex Company. In addition to Hudson-Essex sales, the company will handle complete service work for both lines of cars.

Kelso, Wash., Aug. 21.—Parrott's Garage, of this city, has been appointed Studebaker distributor for Kelso and Longview, according to W. A. Pettengill, representing the Studebaker Corporation of America. Before coming to Kelso in 1922, Herman Parrott, operator of the garage, was associated with various Portland, Ore., automobile firms.

Lincoln, Neb., Aug. 21.—The Lincoln Buick Company has moved its used car department to the main building of the Buick Motor Company branch, 13th and Que Streets, and has appointed W. S. Thomas as manager of the department. The Lincoln Buick Company leases quarters in the Buick branch building, and is operated by Fred Sidles.

Watertown, N. Y., Aug. 21.—Leon W. Quick, Watertown dealer for Oakland, Pontiac, La Salle and Cadillac cars, has now located in his new quarters at 303 State St. The building has been remodeled and refinished and is fully equipped with display rooms, service department and paint shop. He has previously been located in the Manfred garage on Arsenal Street and is moving to secure larger quarters.

Galseburg, Ill., Aug. 21.—The Pankey-Dawdy Motor Company, 172 South Prairie St., has been appointed local dealer for the Chrysler Motor Company. William R. Pankey and C. I. Dawdy, for the past three years with the Shirck Motor Company, are proprietors of the new firm.

Boston, Aug. 21.—The Massachusetts Motor Car Company has taken an additional building adjoining its present location, and an open air lot, to accommodate its rapidity increasing business. This gives it covered quarters double the previous size, at 973 to 999 Commonwealth Ave. A number of men have also been added to the sales staff.

Hartford, Conn., Aug. 21.—Business is looking up with the Colonial Auto Company, Studebaker distributor, according to Thomas C. White, sales manager of the company. "July was a good month for us and August is going to be even better. More interest has been shown in the last three weeks than in some time past, which indicates very clearly the change in mind of the buying public. It has been our experience that business may be had by going out after it. Our sales force is going after it and the results are satisfactory. Since the arrival of the free wheeling models business has been on the upward trend."

In the Bus Field

Jamaica, L. I., Aug. 21.—Work has been in progress for a year and will be completed next month for the erection of a $1,500,000 bus terminal building, which will cover more than three and a half acres in the east side of New York Avenue, south of Jamaica Avenue and adjacent to the Union Hall Street station of the Long Island Railroad, Jamaica, Queens, it is announced by officials of the New York Holding Company, the builders and owners. All bus lines in Jamaica will be able to centralize their transportation facilities in the new terminal with the capacity to unload 300 buses in an hour, it was said by the company, which lays claim to the largest bus terminal in the world. Space is provided for the storage of 150 buses besides the 300 which regularly unload every hour, and the terminal will contain an arcade of twenty-eight stores.

Corning, N. Y., Aug. 21.—A union bus terminal has been established here at 84 Pine St. The new terminal, complete with a comfort station, comfortable chairs and ticket office, will be utilized by the urban and interurban lines of the City Bus System and also the coast-to-coast bus lines passing through the city.

Spokane, Wash., Aug. 21.—Hofius-Ferris Equipment Company has taken on the Kenworth line of trucks and buses in this territory. The new department has been placed in charge of E. D. McDonnell, formerly with Nelson Motor Company and with the Sterling Truck Company here.

Jackson, Miss., Aug. 21 (UTPS).—The Mississippi Motor Transportation Company, a newly formed company, was granted permission by the Mississippi Railroad Commission recently to operate a network of 3,600 miles of bus lines in the state.

CLASSIFIED ADVERTISEMENTS IN THE AUTOMOTIVE DAILY NEWS BRING RESULTS

Personal Briefs

Little Rock, Ark., Aug. 21.—F. R. Daniel, formerly secretary and general manager of the Estes Buick Company, has been promoted to divisional manager for the Buick Company. His territory will embrace Ohio and Kentucky with headquarters in Cincinnati. Mr. Daniel left the Little Rock company a year ago to become manager of a Buick branch at Memphis.

Portland, Ore., Aug. 21.—H. G. Anderson of the Blackwell Motor Company, has been elected president of the Portland Used Car Managers' Association at a recent meeting. D. C. Lewis of the J. K. Leander Company, was elected vice-president, and Harry Burrows of the J. K. Leander Company, was elected secretary-treasurer.

Portland, Ore., Aug. 21.—Appointment of J. A. Russell as used car manager of the Nash division of Wentworth and Irwin, Inc., has been announced. Russell succeeds W. B. Mason, who has gone to Seattle. Russell has been in business in Portland for the past seven years.

Madison, Wis., Aug. 21.—William Ferguson, formerly a salesman with the Jacobson Auto Company of this city, has been named sales manager of the organization succeeding J. Warren Snell. Mr. Snell will devote most of his time to Wisconsin Super-Service Station, Inc., of which he is president. He continues as secretary and treasurer of the Jacobson Auto Company, however.

Evansville, Ind., Aug. 21.—George Heston, for the past three years with the wholesale distribution department, Graham-Paige Motors Corporation, Detroit, has joined the retail sales department, Graham-Paige Company of Evansville, Inc., distributor for southern Indiana and western Kentucky.

CLASSIFIED ADVERTISEMENTS IN THE AUTOMOTIVE DAILY NEWS BRING RESULTS

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HIGH READER INTEREST

Plus

VISIBILITY OF ADVERTISING COPY

Automotive Daily News offers high reader interest plus greatest visibility of copy, a combination that is ideal for responsiveness.

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Its visibility of copy is outstanding among business papers. Tabloid page size, with all advertisements of less than page size literally wrapped up in the news.

Review and Reference Number AUGUST - - - 27

30,000 DISTRIBUTION

AMONG THOSE WHO WILL RECEIVE THIS ISSUE:

Regular subscribers (A. B. C. net paid)	Over 10,000
Truck fleet owners and bus operators	Over 7,000
Wholesalers of accessories, parts, shop equipment	Over 2,000
Retailers of accessories and parts	Over 4,000
Engineers, production men, etc	Over 4,000
Wholesalers and retailers of trucks exclusively	Over 2,000

FORMS CLOSE 9 A. M. AUGUST 26TH

Automotive Daily News

H. A. TARANTOUS, Vice-Pres. GRAYBAR BUILDING, NEW YORK CITY

CHICAGO OFFICE
Willard B. Cotton, Mgr.
333 No. Michigan Ave.
Chicago, Ill.

DETROIT OFFICE
Geo. M. Slocum, Mgr.
Fisher Building
Detroit, Mich.

EASTERN OFFICE
J. Edward Schipper, Mgr.
Graybar Building
New York City

BOSTON OFFICE
Metz B. Hayes, Mgr.
Little Building
Boston, Mass.

PACIFIC COAST
Blanchard, Nichols & Coleman
Am. Nat. Bank Building
San Francisco, Cal.